Box 05A

Book

18

JOB TRACKING PRODUCTION ORDER

Company Name: _____ **DATE:** _____

Order #: _____

		INITIALS:
☐	Hold Drawings & Update Files	_____
☐	Print Order	_____
☐	Return Superceded Originals	_____
☐	Return Originals	_____
☐	Packed & Shipped	_____

Date Sent: _____

Time Sent: _____ a.m. ☐ p.m. ☐

COMMENTS:

_____

_____

_____

WTC DRAWING
BOOK 18

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT	TITLE	DATE
THE WORLD TRADE CENTER	DRAWING BOOK 18 - ANCHOR STRAPS	

REVISIONS

18 - AB1 Anchor Straps - Key Plans - Core

18 - AB2 Anchor Straps - Details - Core

18 - AB3 Anchor straps - Key Plans - Exterior Wall

18 - AB4 Anchor straps - Details - Exterior Wall



DESIGNED

DRAWN

REVIEWED

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DRAWING BOOK 18 - STRAP ANCHORS | DATE: 10/ 6/72

REVISIONS

PRINTED 5/18/73

18-AB

18-AB0- 0	5/18/73	18-AB1-38	4/30/69	18-AB2-23	12/13/68	18-AB2-66.3	4/30/69	18-AB3-14	2/ 7/69
*18-AB1- 1	[illegible]	18-AB1-39	4/30/69	18-AB2-24	10/ 1/69	18-AB2-67.1	4/30/69	18-AB4- 1	11/ 7/69
18-A1 - 2	10/30/68	18-AB1-40	4/30/69	18-AB2-25	2/ 7/69	18-AB2-67.2	4/30/69	18-AB4- 2.1	2/ 7/69
18-A1 - 3	10/30/68	18-AB1-41	4/30/69	18-AB2-26	5/28/69	18-AB2-68	4/30/69	18-AB4- 2.2	2/ 7/69
18-B1 - 3.1	5/20/69	18-AB1-42	5/28/69	18-AB2-27	12/13/68	18-AB2-69.1	10/ 1/69	18-AB4- 3.1	2/ 7/69
18-A1 - 4	10/30/68	18-AB1-43	5/28/69	18-AB2-28	12/13/68	18-AB2-69.2	10/ 1/69	18-AB4- 3.2	2/ 7/69
18-B1 - 4.1	5/20/69	18-AB1-44	4/30/69	18-AB2-29	7/14/69	18-AB2-70	5/20/69	18-AB4- 3.3	2/ 7/69
18-A1 - 5	10/30/68	18-AB1-45	4/30/69	18-AB2-30	12/13/68	18-AB2-71	5/20/69	18-AB4- 4.1	2/ 7/69
18-B1 - 5.1	5/20/69	18-AB1-46	4/30/69	18-AB2-31	5/28/69	18-AB2-72	5/20/69	18-AB4- 4.2	2/ 7/69
18-A1 - 6	10/30/68	18-AB1-47	4/30/69	18-AB2-32	5/28/69	18-AB2-73	5/28/69	18-AB4- 4.3	2/ 7/69
18-B1 - 6.1	10/ 1/69	18-AB1-48	4/30/69	18-AB2-33	5/28/69	18-AB2-74.1	10/ 1/69	18-AB4- 4.4	2/ 7/69
18-A1 - 7	10/16/68	18-AB1-49	4/30/69	18-AB2-34	4/30/69	18-AB2-74.2	10/ 1/69	18-AB4- 4.5	2/ 7/69
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18-A1 - 8	12/13/68	18-AB1-51	4/30/69	18-AB2-36	4/30/69	18-AB2-76	10/ 1/69	18-AB4- 5.2	2/ 7/69
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18-AB1-10	5/20/69	18-AB1-54	4/30/69	18-AB2-39	4/30/69	18-AB2-78	10/ 1/69	18-AB4- 5.5	2/ 7/69
18-AB1-11	5/20/69	18-AB1-55	4/30/69	18-AB2-40	4/30/69	18-AB2-79.1	10/ 1/69	18-AB4- 5.6	2/ 7/69
18-AB1-12	5/20/69	18-AB1-56	4/30/69	18-AB2-41	4/30/69	18-AB2-79.2	10/ 1/69	18-AB4- 5.7	2/ 7/69
18-A1 -13	12/13/68	18-AB1-57	4/30/69	18-AB2-42.1	4/30/69	18-AB2-80	10/ 1/69	18-AB4- 6.1	2/ 7/69
18-B1 -13.1	10/ 1/69	18-AB1-58	4/30/69	18-AB2-42.2	4/30/69	18-AB2-81.1	10/ 1/69	18-AB4- 6.2	2/ 7/69
18-A1 -14	12/13/68	18-AB1-59	7/14/69	18-AB2-42.3	4/30/69	18-AB2-81.2	10/ 1/69	18-AB4- 7.1	11/ 7/69
18-B1 -14.1	10/ 1/69	18-AB1-60	7/14/69	18-AB2-43	4/30/69			18-AB4- 7.2	12/ 3/69
18-A1 -15.1	2/ 7/69			18-AB2-44	5/20/69			18-AB4- 7.3	12/ 3/69
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18-AB1-16.1	2/ 7/69			18-AB2-51.1	2/ 7/69			18-AB4- 8.3	11/ 7/69
18-B1 -16.2	10/ 1/69	18-AB2- 1	10/ 1/69	18-AB2-51.2	2/ 7/69			18-AB4- 9	11/ 7/69
18-B1 -16.3	10/ 1/69	18-AB2- 2.1	2/ 7/69	18-AB2-52	10/30/68			18-AB4- 10.1	11/ 7/69
18-AB1-17	2/ 7/69	18-AB2- 2.2	4/30/69	18-AB2-53	10/30/68	18-AB3- 1	11/ 7/69	18-AB4- 10.2	11/ 7/69
18-AB1-19	2/ 7/69	18-AB2- 3	10/ 1/69	18-AB2-54.1	12/13/68	18-AB3- 2	2/ 7/69		
18-AB1-19	2/ 7/69	18-AB2- 4	10/ 1/69	18-AB2-54.2	5/20/69	18-AB3- 3.1	2/ 7/69		
18-AB1-20	2/ 7/69	18-AB2- 5	5/28/69	18-AB2-55	12/13/68	18-AB3- 3.2	2/ 7/69		
18-AB1-21	2/ 7/69	18-AB2- 6	4/30/69	18-AB2-56	12/13/68	18-AB3- 4.1	2/ 7/69		
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18-AB1-23	5/28/69	18-AB2- 8	10/16/68	18-AB2-57.2	12/13/68	18-AB3- 4.3	11/ 7/69		
18-AB1-24	5/28/69	18-AB2- 9	10/ 1/69	18-AB2-57.3	10/ 1/69	18-AB3- 4.4	11/ 7/69		
18-AB1-25	5/28/69	18-AB2-10	2/ 7/69	18-AB2-57.4	12/13/68	18-AB3- 4.5	11/ 7/69		
18-AB1-26	5/28/69	18-AB2-11	10/30/68	18-AB2-58	12/13/68	18-AB3- 4.6	11/ 7/69		
18-AB1-27	4/30/69	18-AB2-12	10/ 1/69	18-AB2-59	2/ 7/69	18-AB3- 5	2/ 7/69		
18-AB1-28	4/30/69	18-AB2-13	10/ 1/69	18-AB2-60	4/30/69	18-AB3- 6	2/ 7/69		
18-AB1-29	4/30/69	18-AB2-14	5/20/69	18-AB2-61	4/30/69	18-AB3- 7.1	2/ 7/69		
18-AB1-30	4/30/69	18-AB2-15	5/28/69	18-AB2-62.1	4/30/69	18-AB3- 7.2	2/ 7/69		
18-AB1-31	4/30/69	18-AB2-16	5/28/69	18-AB2-62.2	4/30/69	18-AB3- 8.1	2/ 7/69		
18-AB1-32	4/30/69	18-AB2-17	5/28/69	18-AB2-63	4/30/69	18-AB3- 8.2	2/ 7/69		
18-AB1-33	4/30/69	18-AB2-18	5/28/69	18-AB2-64.1	4/30/69	18-AB3- 9	2/ 7/69		
18-AB1-34	4/30/69	18-AB2-19	4/30/69	18-AB2-64.2	4/30/69	18-AB3-10	2/ 7/69		
18-AB1-35	4/30/69	18-AB2-20	4/30/69	18-AB2-65	4/30/69	18-AB3-11	2/ 7/69		
18-AB1-36	4/30/69	18-AB2-21	5/28/69	18-AB2-66.1	4/30/69	18-AB3-12	2/ 7/69		
18-AB1-37	4/30/69	18-AB2-22	5/20/69	18-AB2-66.2	4/30/69	18-AB3-13	2/ 7/69		

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — OF THE STATE OF NEW YORK

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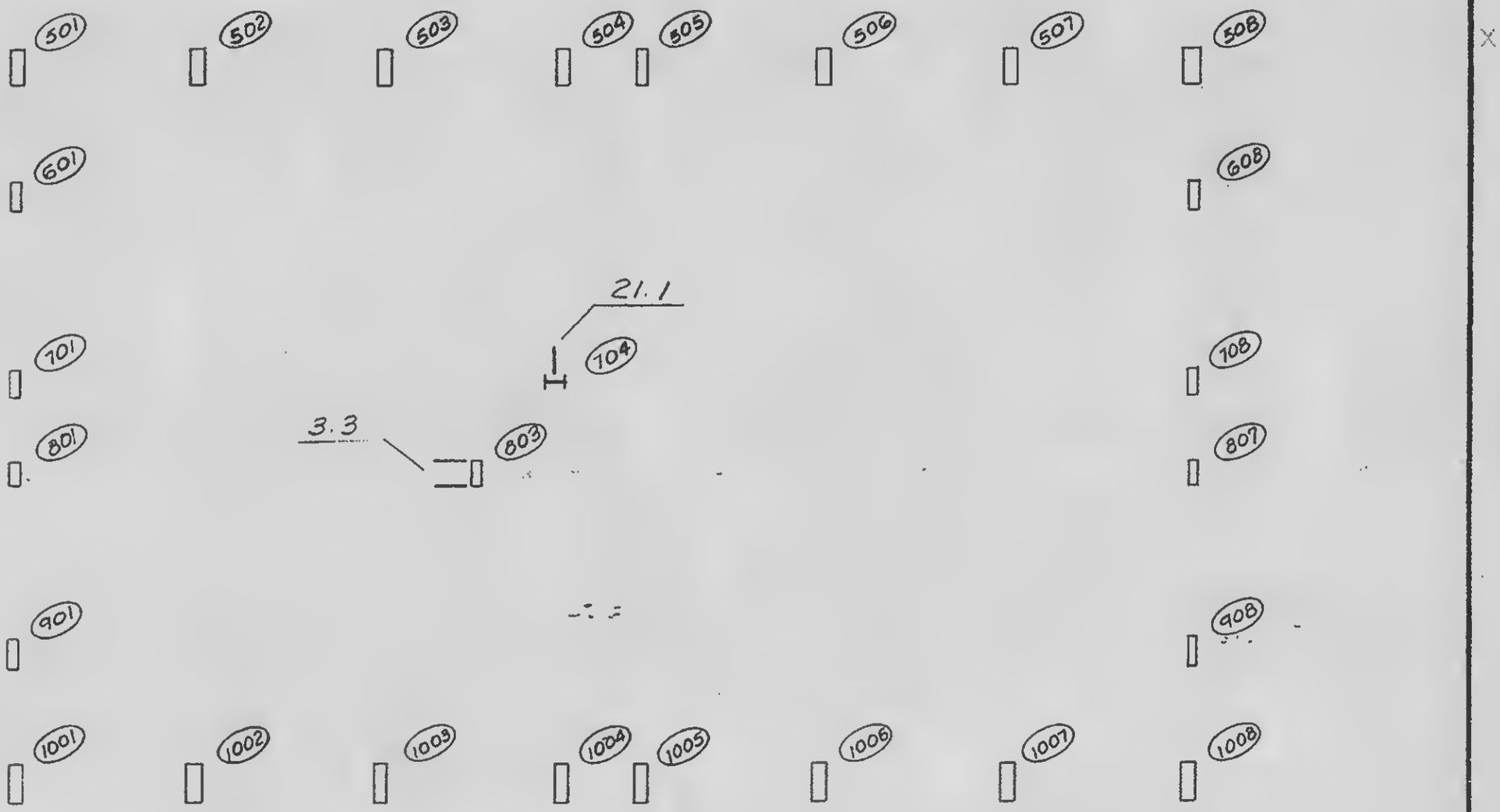
18-AB0-0

SEELYE, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR STRAPS - KEY PLAN - ELEV. 242 - TOWER A | DATE: 10/30/68

REVISIONS

NORTH



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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED

DRAWN
E. Wexler

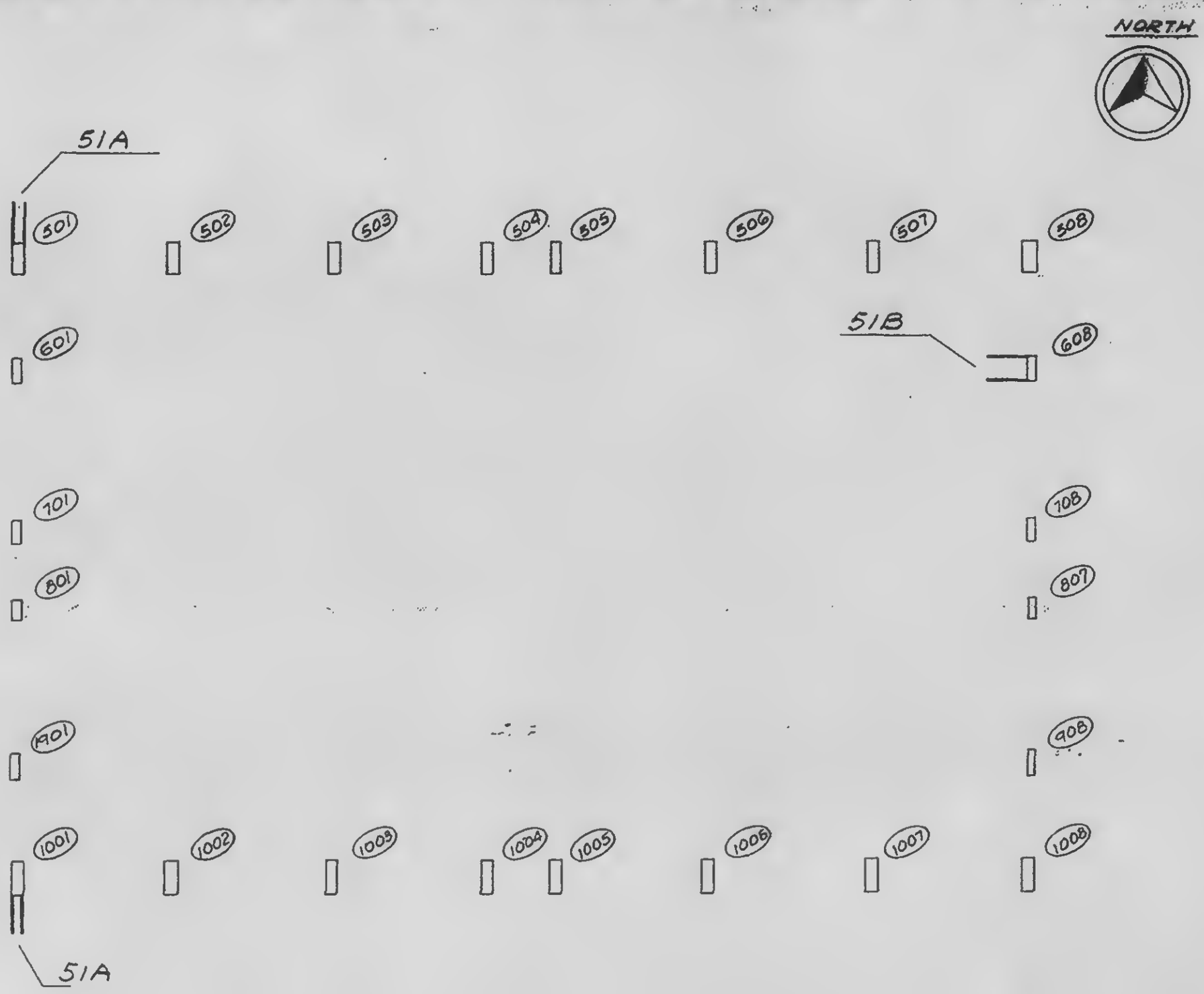
REVIEWED

18-A1-2

KELLING, WELLS, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE "T" RAIL ANCHORS - KEY PLAN - ELEV. 264 - TOWER A | DATE 10/28/68

REVISIONS



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DRAWN Wexler

REVIEWED

18-Ai-3

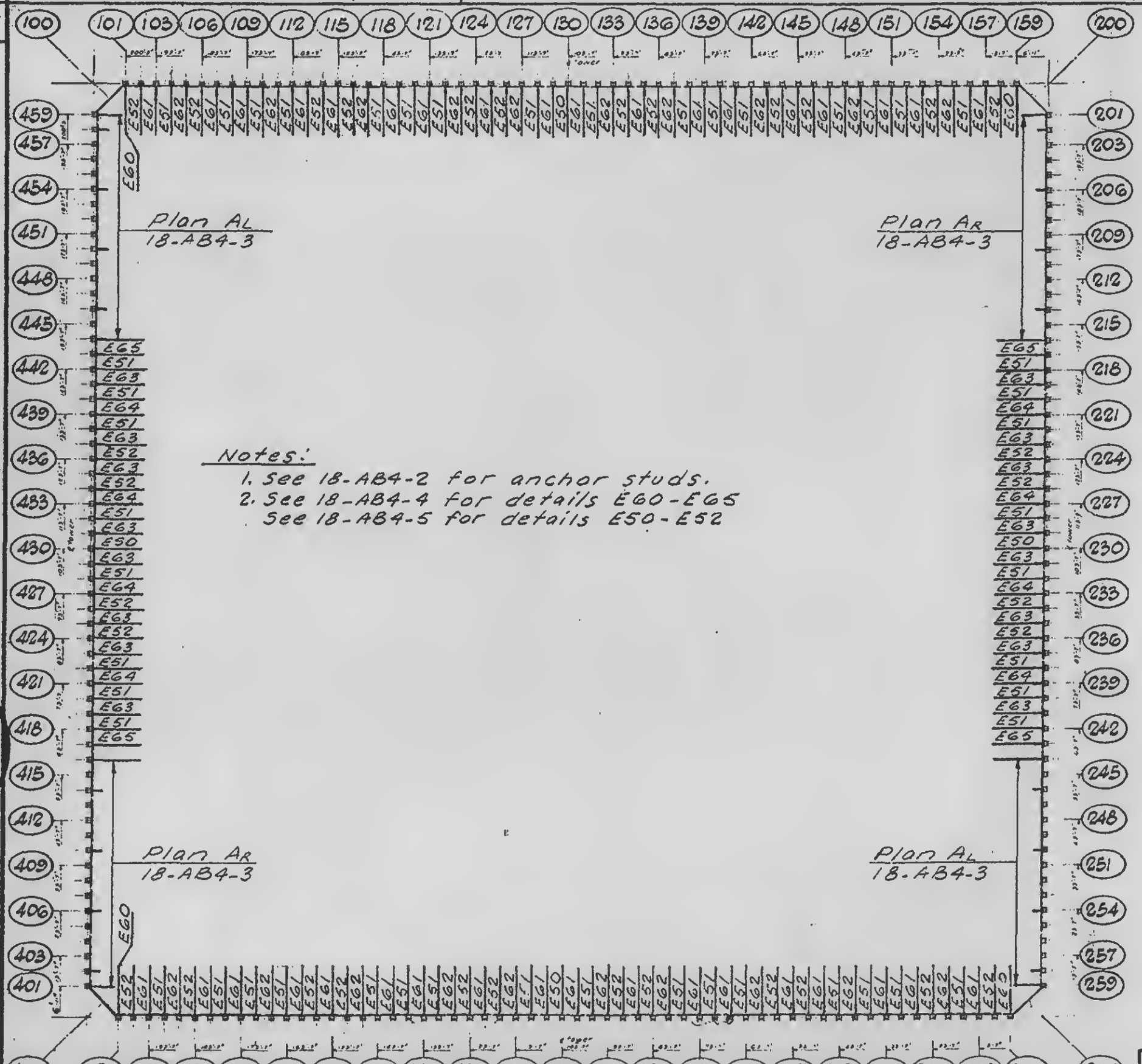
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOORS TOWER A (See Table)

DATE: 2-7-69

VISIONS



Floors Included
10 - 24
26 - 40
50 - 58
60 - 74
84 - 91
93 - 106

Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-4 for details E60-E65
   See 18-AB4-5 for details E50-E52

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DESIGNED S. Karp

DRAWN A. Franqui

REVIEWED

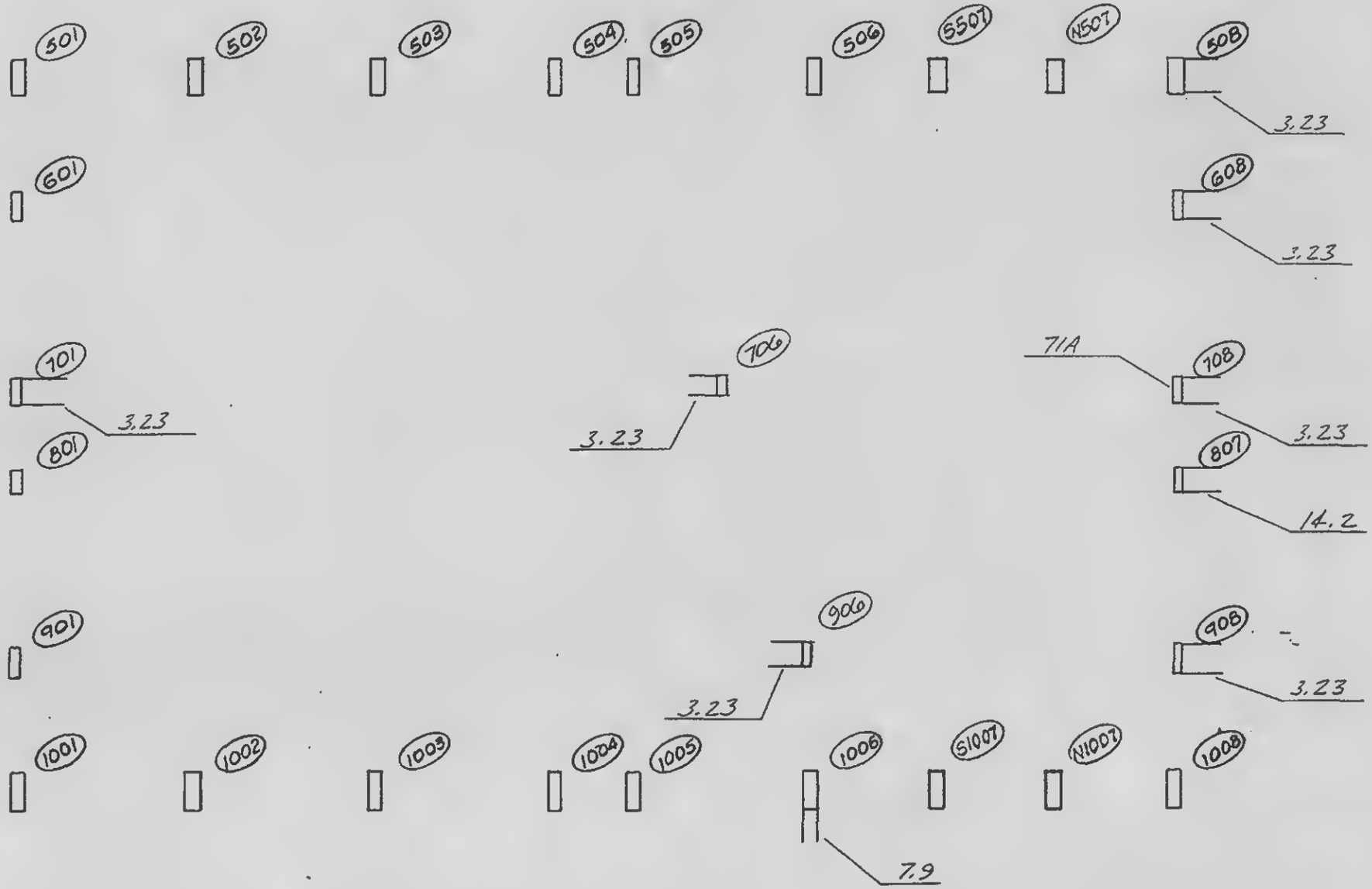
18-A3-4.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLAN - ELEV. 264 - TOWER 'B' | DATE 5-20-69

REVISIONS





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STATE OF NEW YORK

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S.T.M.
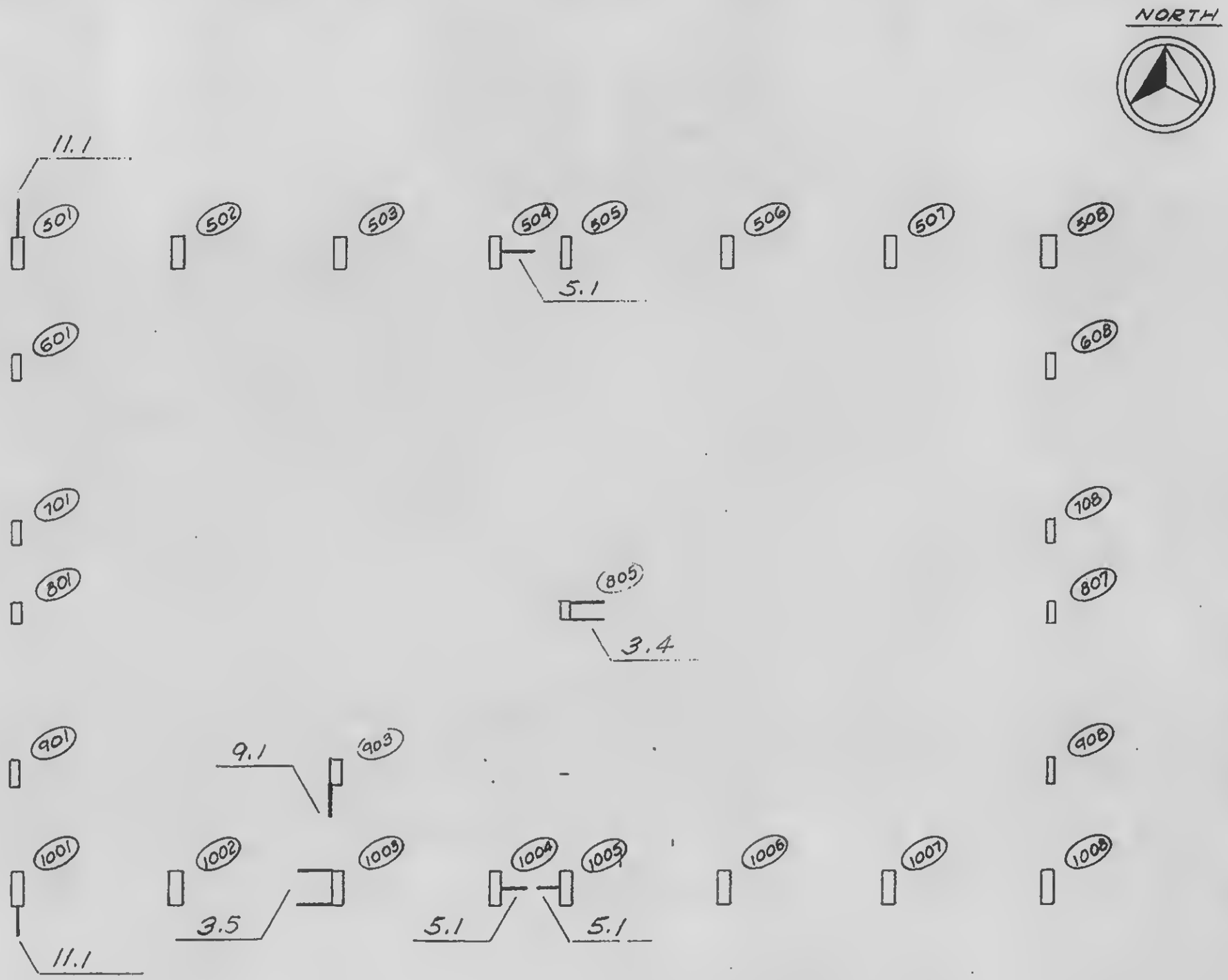
REVIEWED
W. Brewer

18-31-3.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLAN - EL 274 - TOWER A | DATE 10/30/68

REVISIONS



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DESIGNED T. O'Neill

DRAWN S. Wexler

REVIEWED

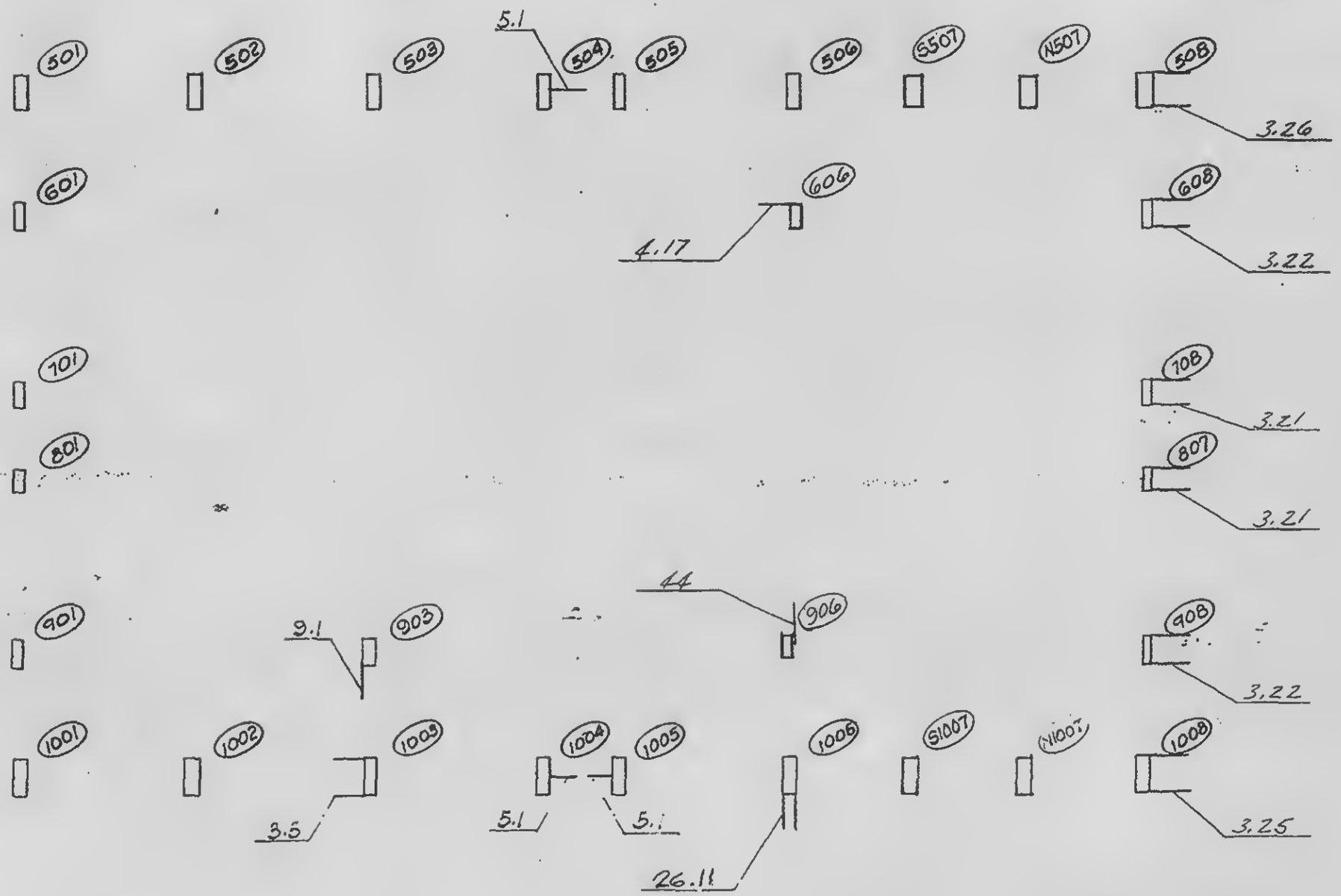
18-A1-4

Skilling, Helle, Christiansen, Robertson — Structural & Civil Engineers

THE WORLD TRADE CENTER — ANCHOR KEY & ELEV. 274 - TOWER 1&2 — DATE 5-[illegible]

REVISIONS

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No. 34360
CITY OF THE STATE OF NEW YORK

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S.T.M.

REVIEWED
C.W. Brewer

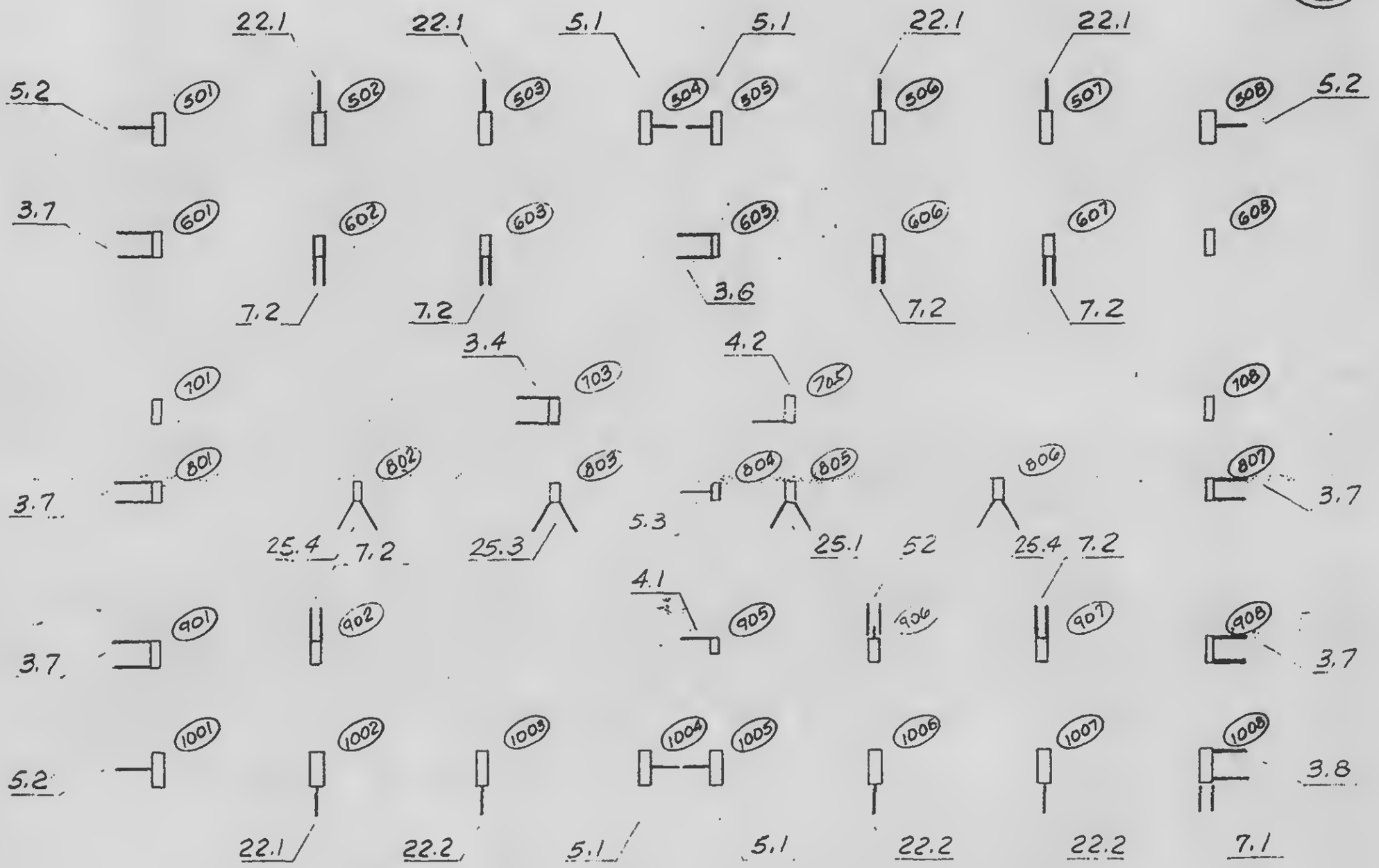
18-31-4.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

THE WORLD TRADE CENTER — STRAP ANCHORS - KEY PLAN - EL 264 - TOWER A — 10-30-68

REVISIONS

NORTH



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D. Neill

DRAWN
Wexler

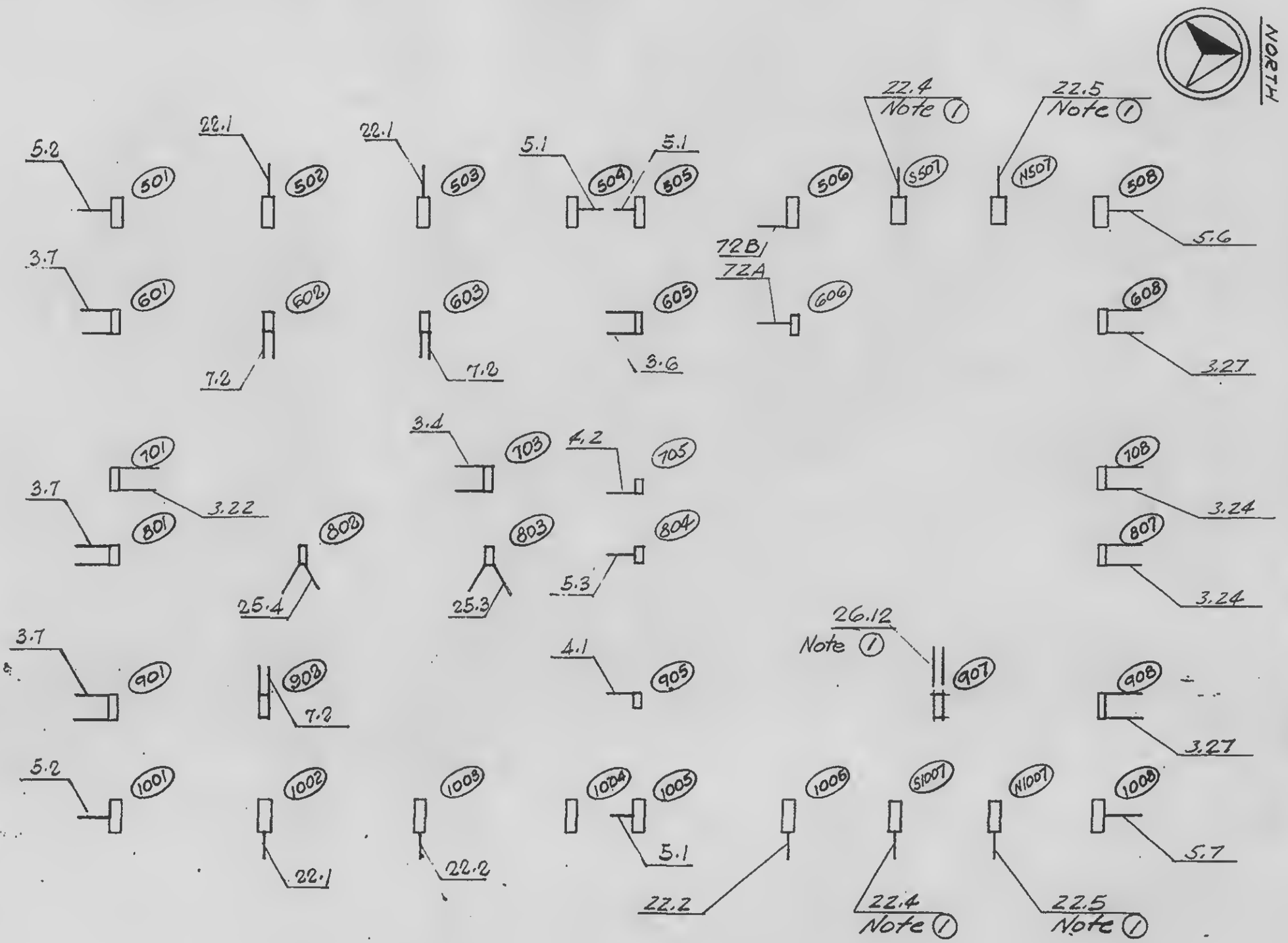
REVIEWED

18-A1-5

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLAN - ELEV. 284 - TOWER '8' | DATE 5-20-69

REVISIONS



Note (1): Install after removal of existing PATH tube.

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DESIGNED

DRAWN S.T.M.

REVIEWED W. Brewer

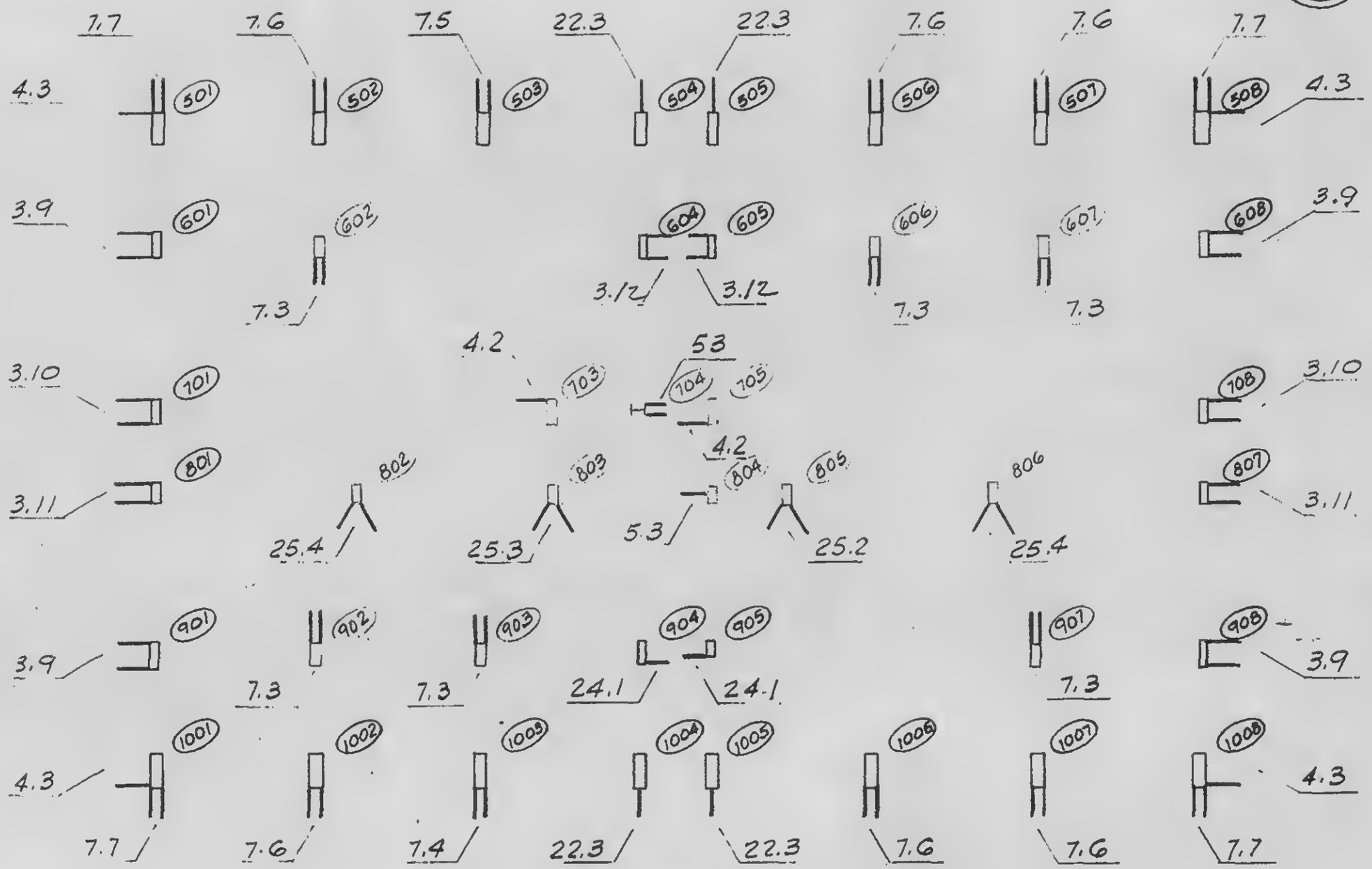
18-B.1-5.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLAN - EL 294 - TOWER A | DATE 10/30/68

REVISIONS

NORTH



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DESIGNED L. O'Neill

DRAWN S. Wexler

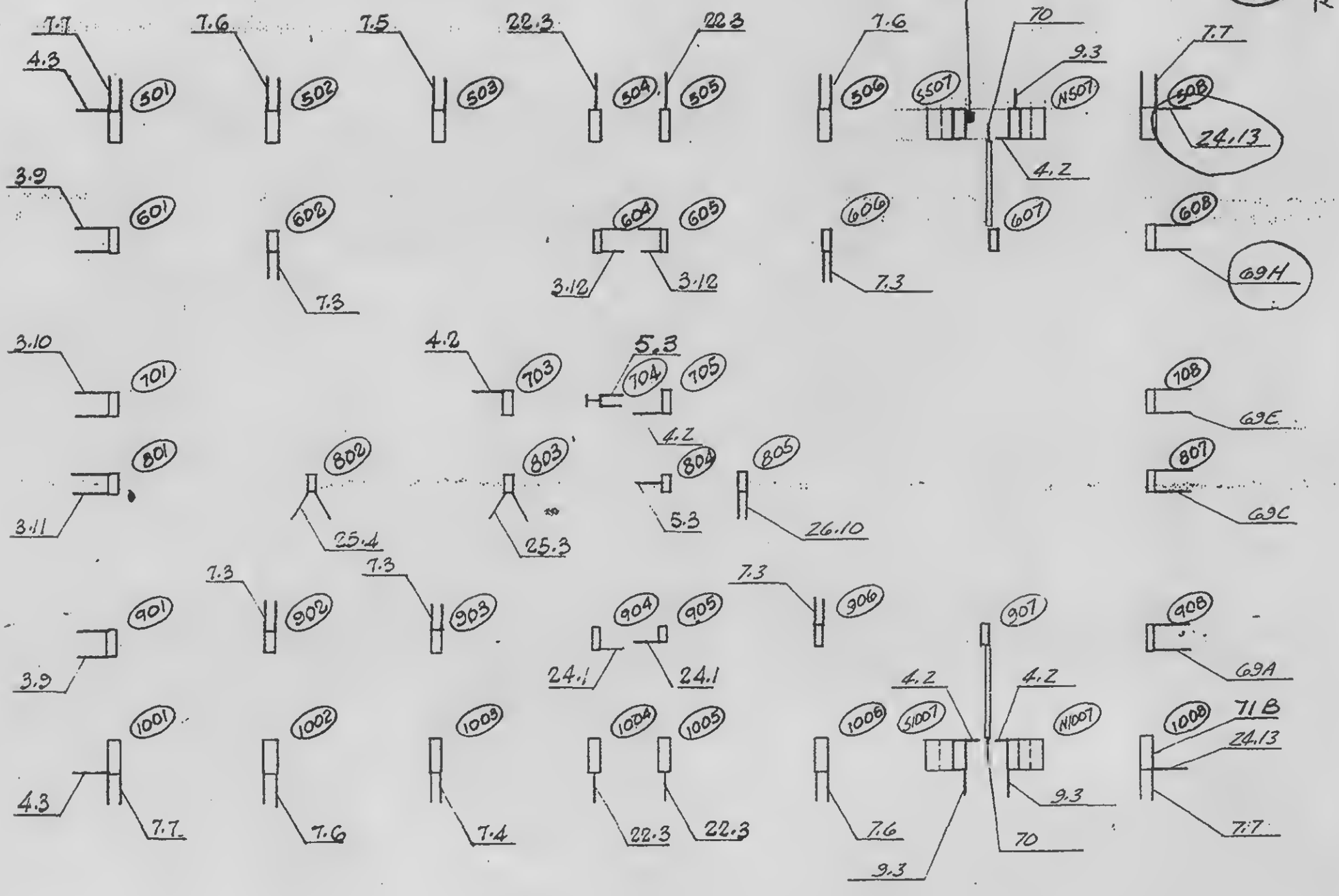
REVIEWED

18-A1-6

REVISIONS

-69

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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S.T.M.

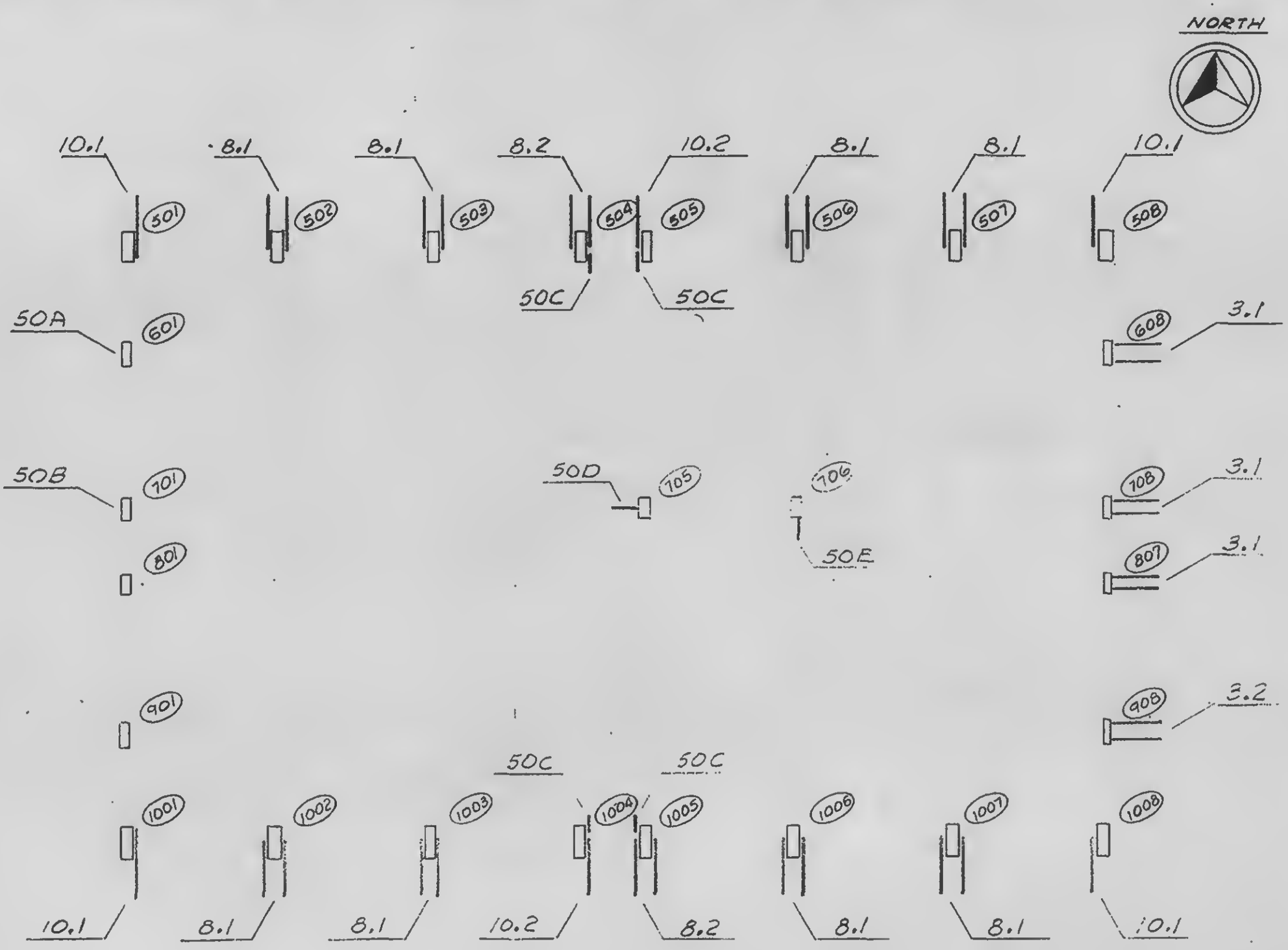
REVIEWED
W. Brewer

8-81-6.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE ANCHOR STRAPS, KEY PLAN -FLOOR 1 - TOWER A | DATE 10-16-68

REVISIONS



LESLIE E. ROBERTSON — LICENSED PROFESSIONAL ENGINEER — No. 34360 — STATE OF NEW YORK

DRAWN E Wexler

REVIEWED

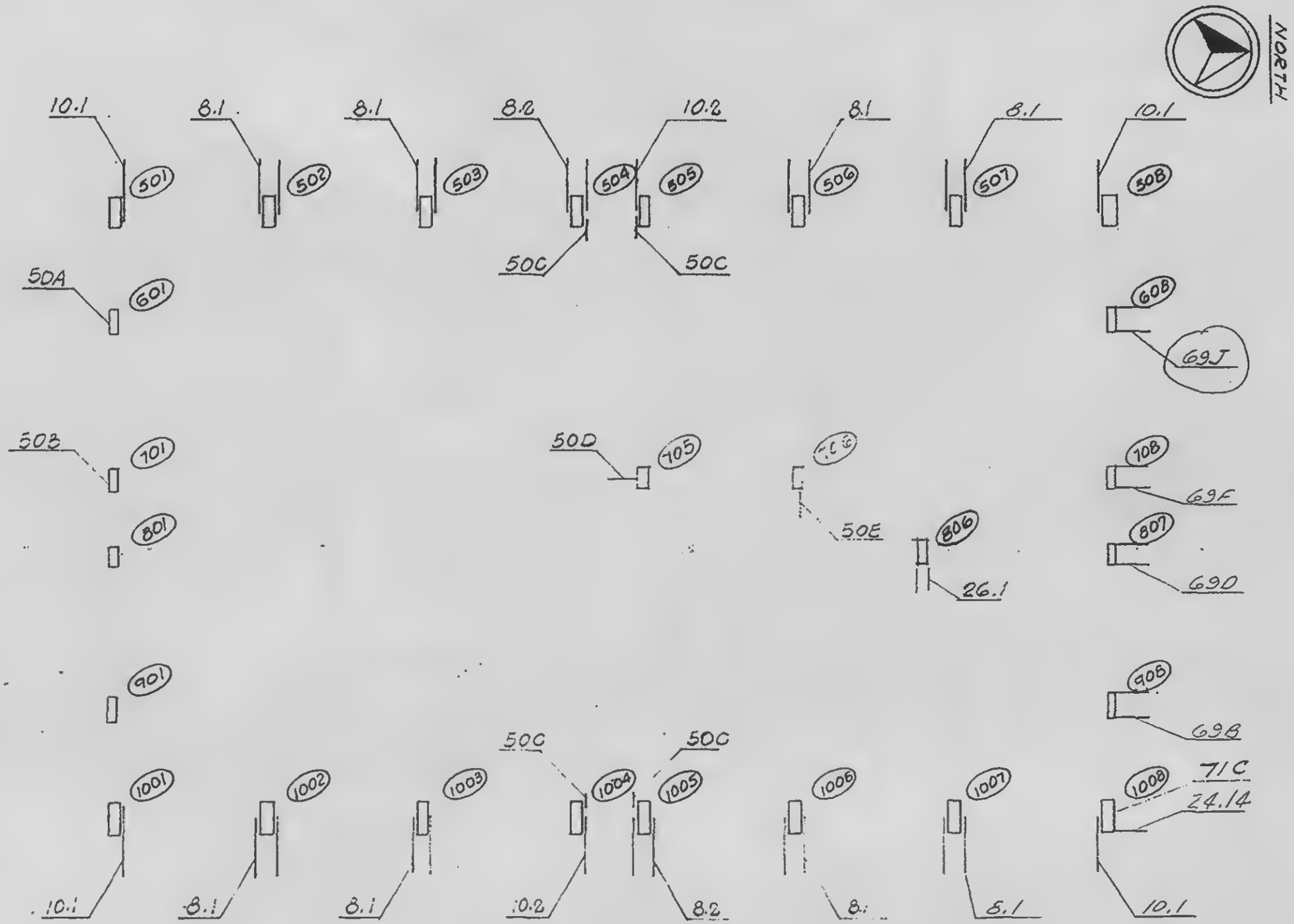
18-A1-7

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR STRAPS- KEY PLAN - FLOOR 1 - TOWER 2 | DATE: 5-20-69

REVISIONS

1-1-69



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LESLIE E. ROBERTSON
No. 34360
STATE OF NEW YORK

DESIGNED

DRAWN
S.T.N.

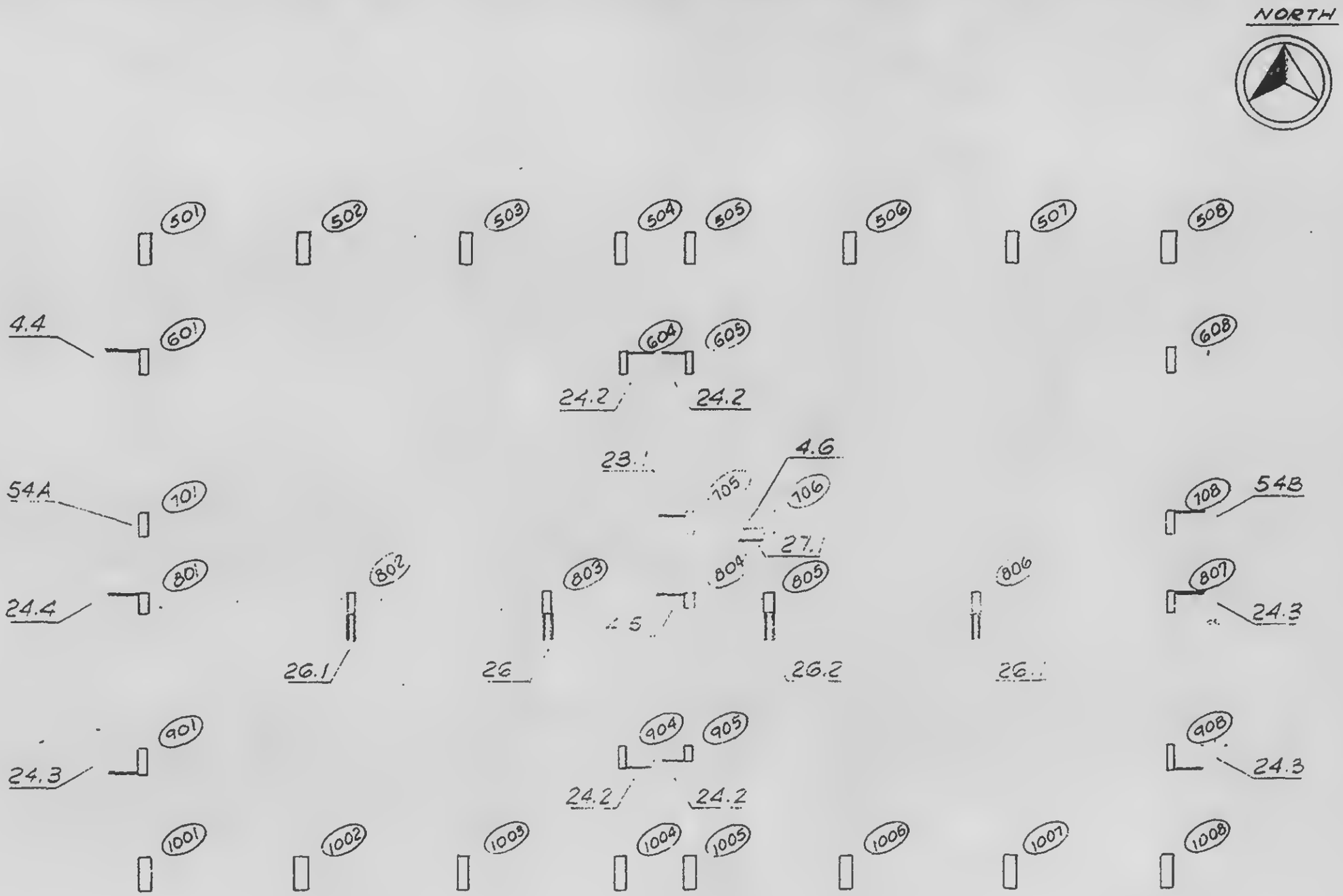
REVIEWED
W. E. Brewer

18-B1-7.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR STRAPS - KEY PLAN - FLOOR 2 - TOWER A | DATE: 12-13-68

REVISIONS



LESLIE E. ROBERTSON — REGISTERED PROFESSIONAL ENGINEER — No. 34360 — CITY OF THE STATE OF NEW YORK

SIGNED: Lowell

DRAWN: Wexler

REVIEWED

18-A1-8

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLAN - FLOOR 2 - TOWER B | DATE 5-20-69

VISIONS



LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34980
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED

DRAWN S.T.M.

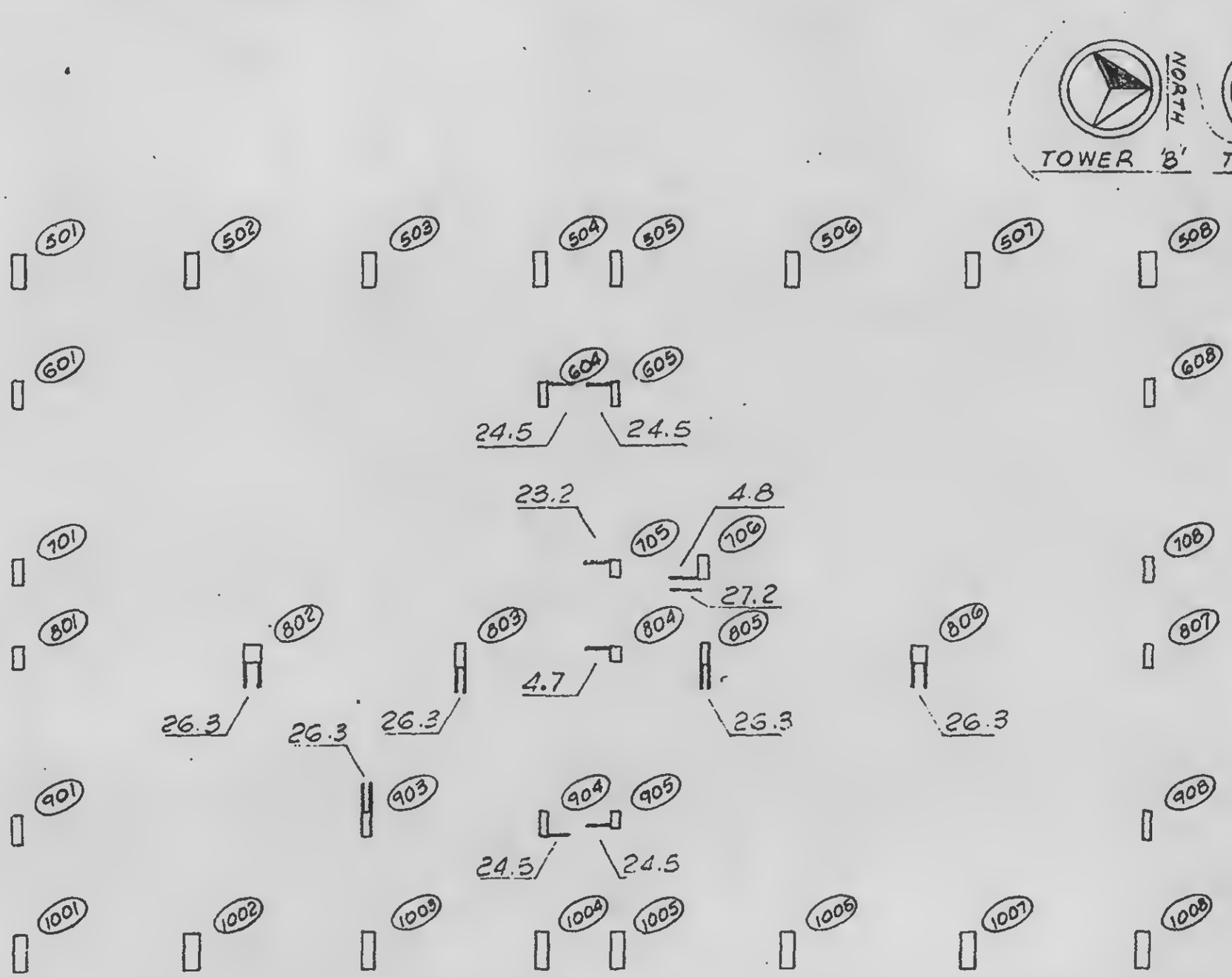
REVIEWED W. Brewer

18-B1-8.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 3 | DATE 12-13-68

REVISIONS
5-20-69



LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED O'Neill

DRAWN S Wexler

REVIEWED W. Brewer

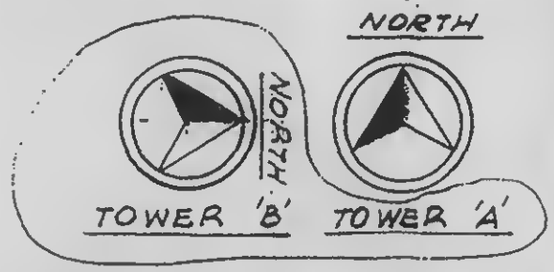
18-AB1-9

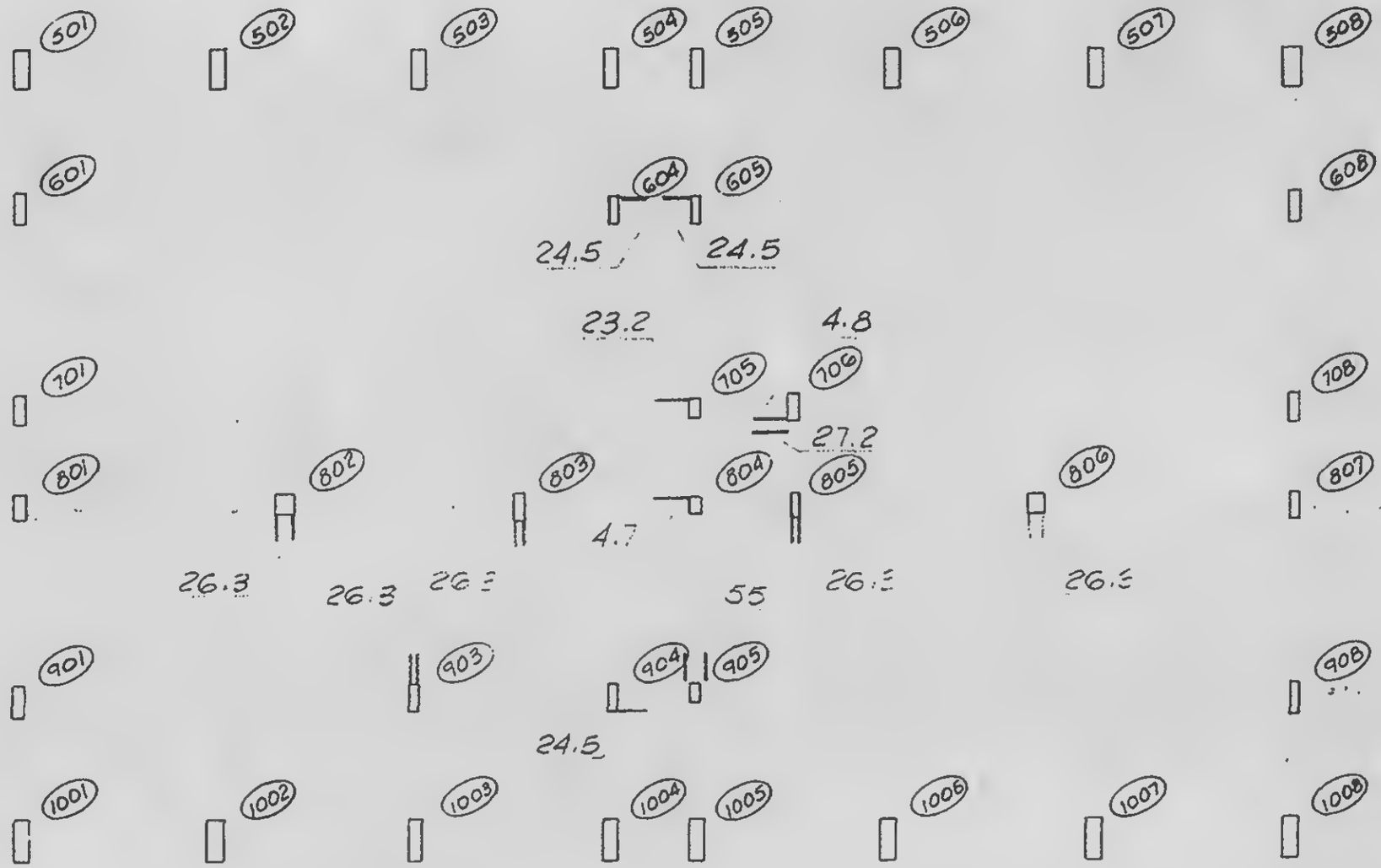
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 4 | DATE 12-13-68

REVISIONS

40-69





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LESLIE E. ROBERTSON
No. 34360
CITY OF THE STATE OF NEW YORK

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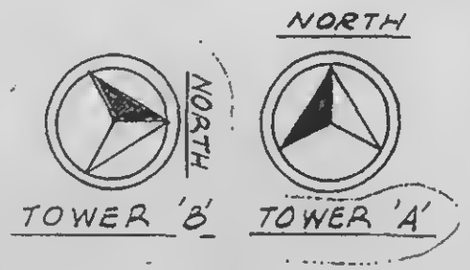
18-AB1-10

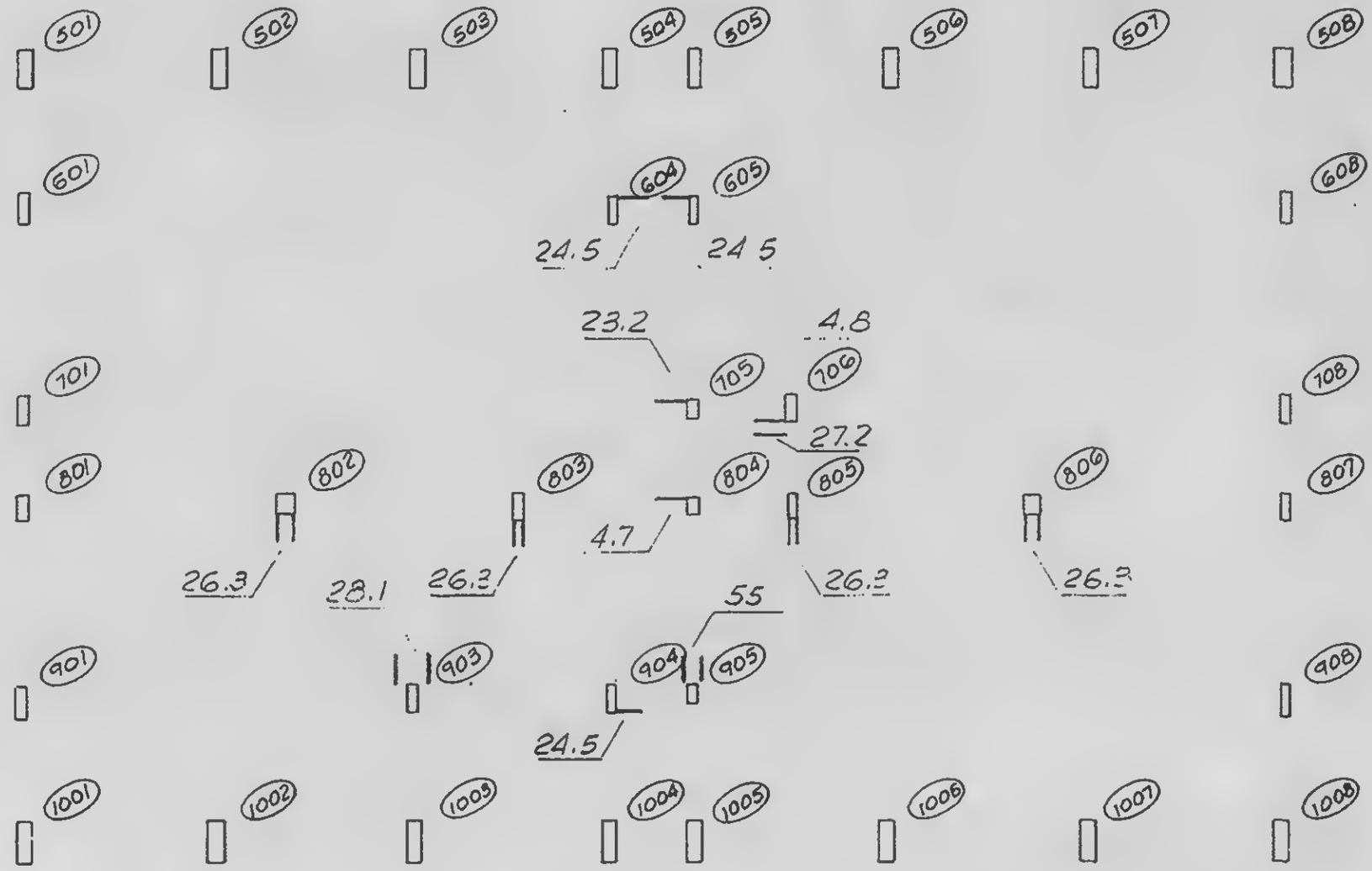
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 5 | DATE 12-13-68

REVISIONS

5-20-69





LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED L. E. Robertson

DRAWN S. Wexler

REVIEWED L. E. Brewer

18-AB1-11

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 6. | DATE 12-13-68

REVISIONS

5-20-69



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LESLIE E. ROBERTSON
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DESIGNED L. O'Neill

DRAWN S. Wexler

REVIEWED L. Brewer

18-A81-12

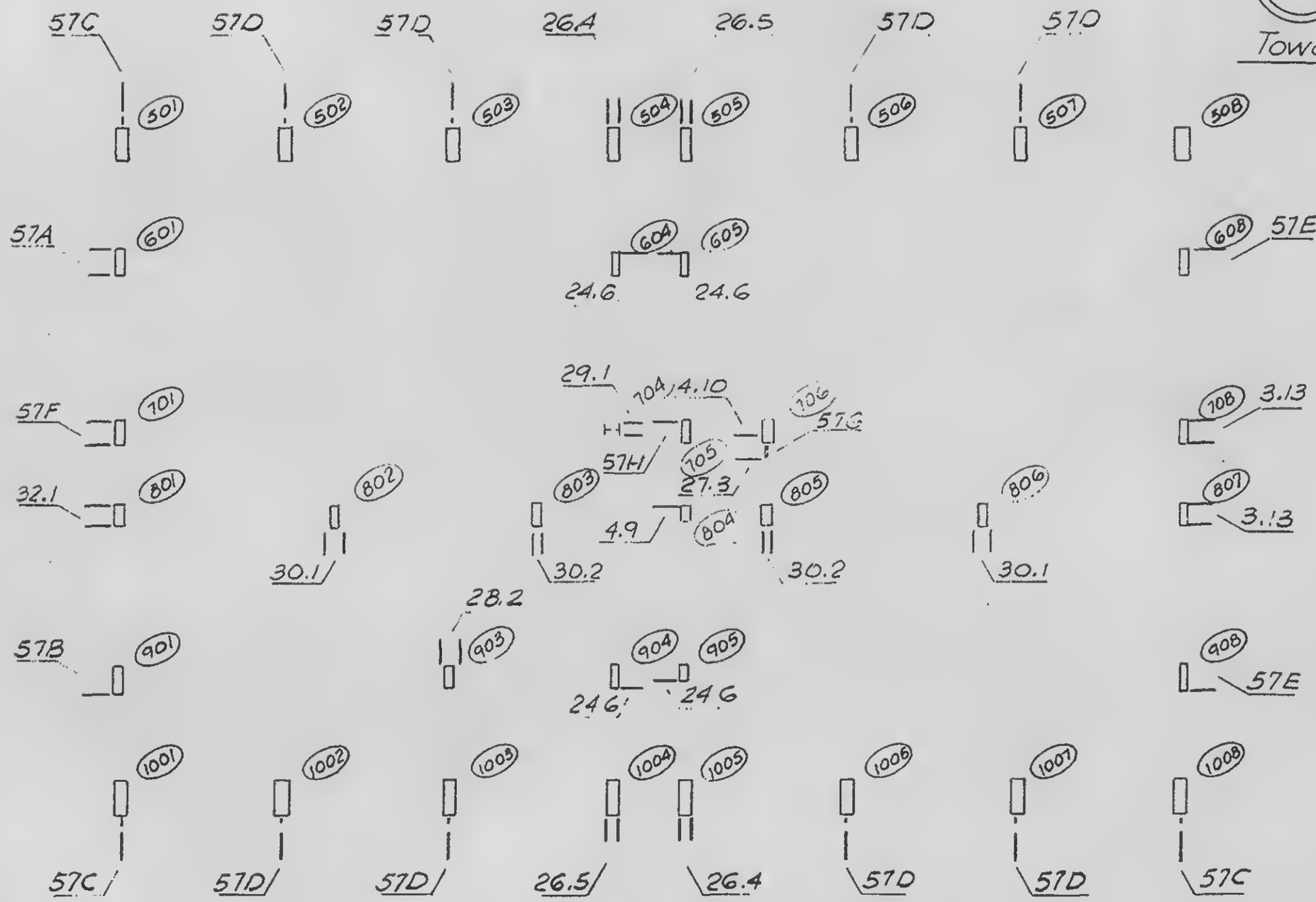
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE ANCHOR STRAPS - KEY PLAN - FLOOR 7 - TOWER A | DATE 12-13-68

REVISIONS

NORTH

Tower A



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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED L. Robertson

DRAWN S. Wexler.

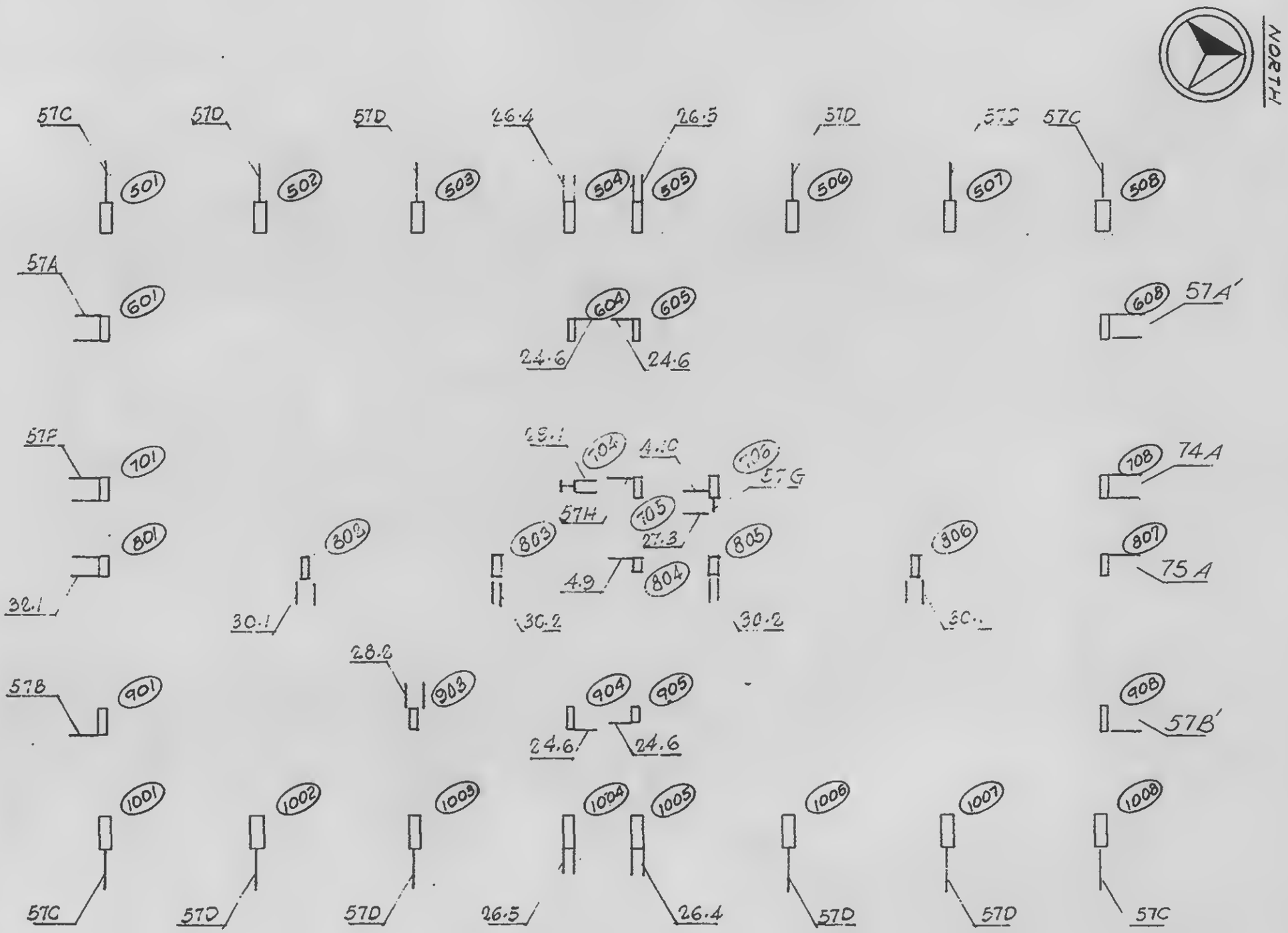
REVIEWED

18-A1-13

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE ANCHOR STRAPS - KEY PLAN - FLOOR 7 - TOWER 8 | DATE 10-1-69

REVISIONS



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DRAWN S.T.M.

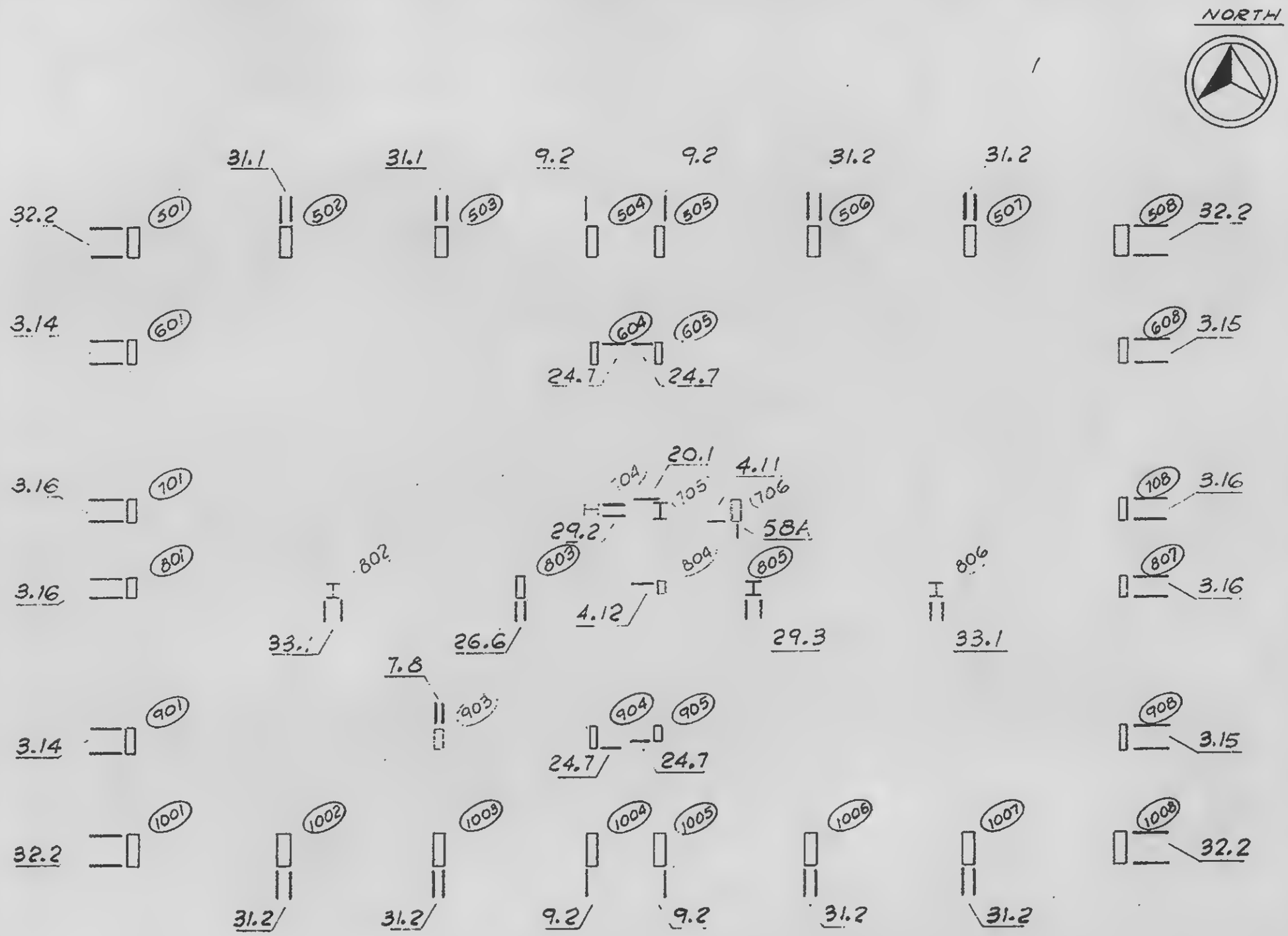
REVIEWED

18-81-13.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLAN - FLOOR 9 - TOWER A | DATE 12-13-68

REVISIONS



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UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED T. O'Neill

DRAWN S. Wexler

REVIEWED

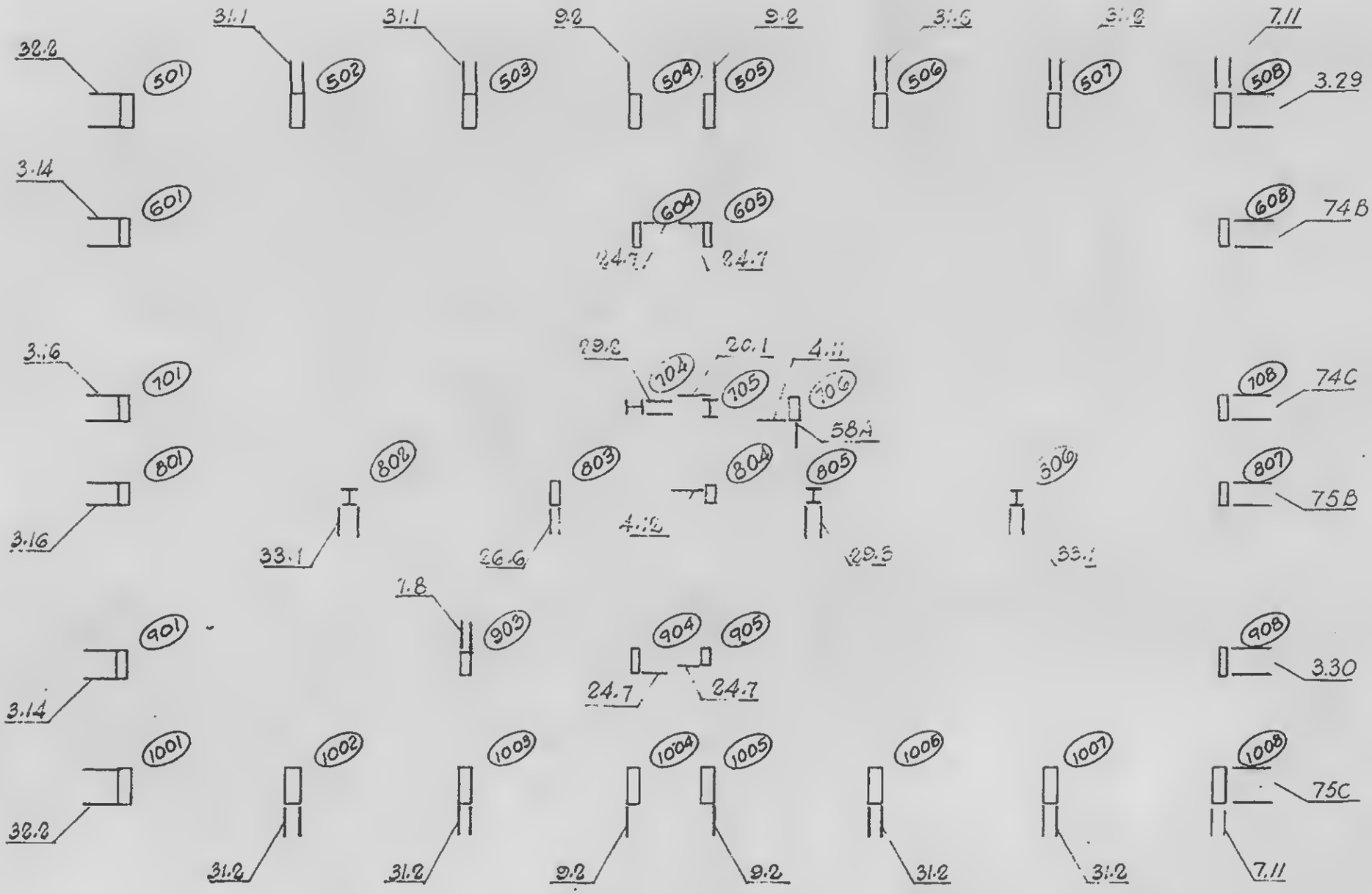
18-A1-14

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLAN - FLOOR 9 - TOWER B | DATE 10-1-69

REVISIONS

NORTH



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DRAWN S.T.M.

REVIEWED

18-B1-14.1

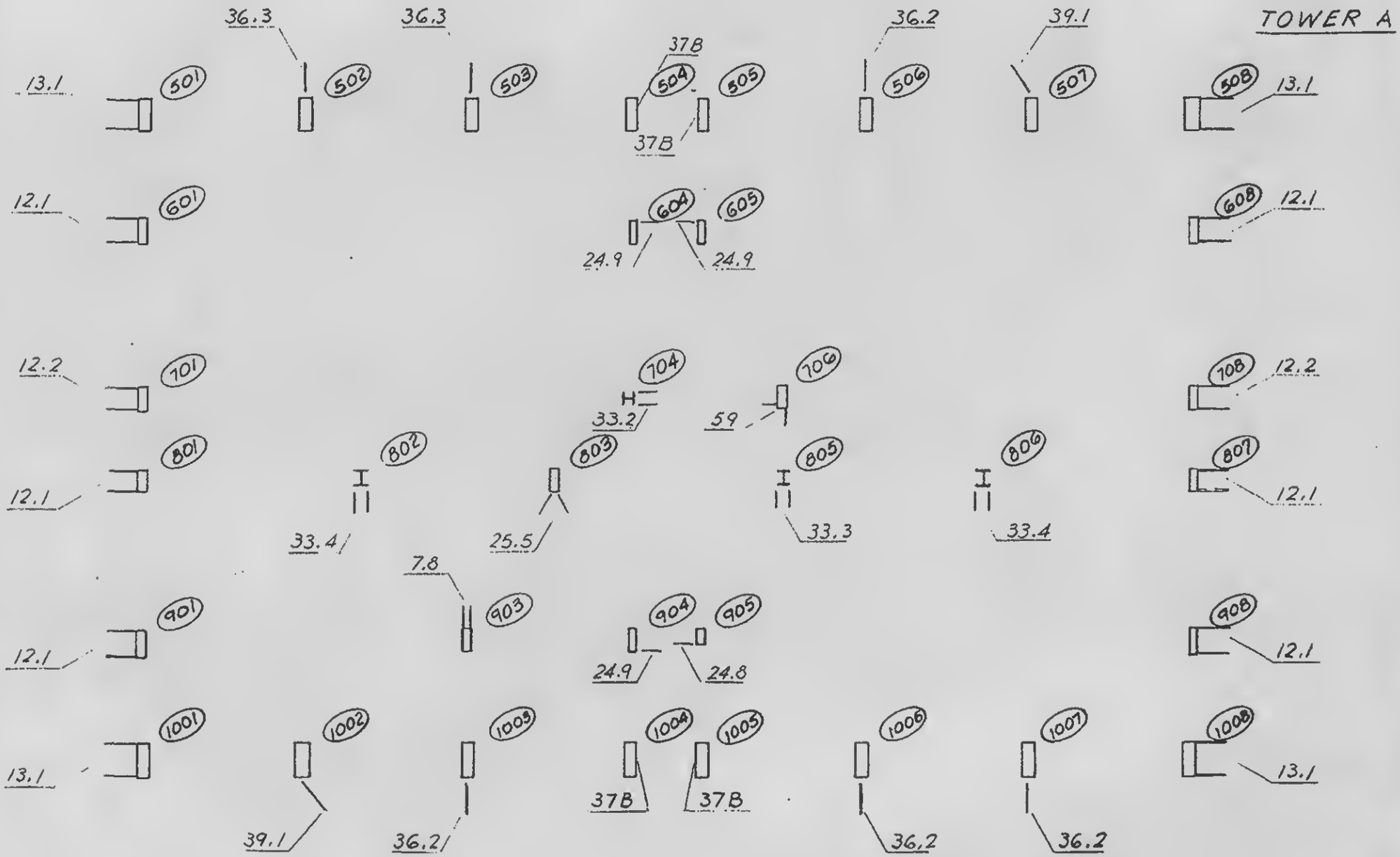
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOORS 10, 11 | DATE: 2-7-69

REVISIONS

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TOWER A



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No. 34360
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DESIGNED: J. O'Neill
DRAWN: F. Smith
REVIEWED: W. Brewer

18 - A1 - 15.1

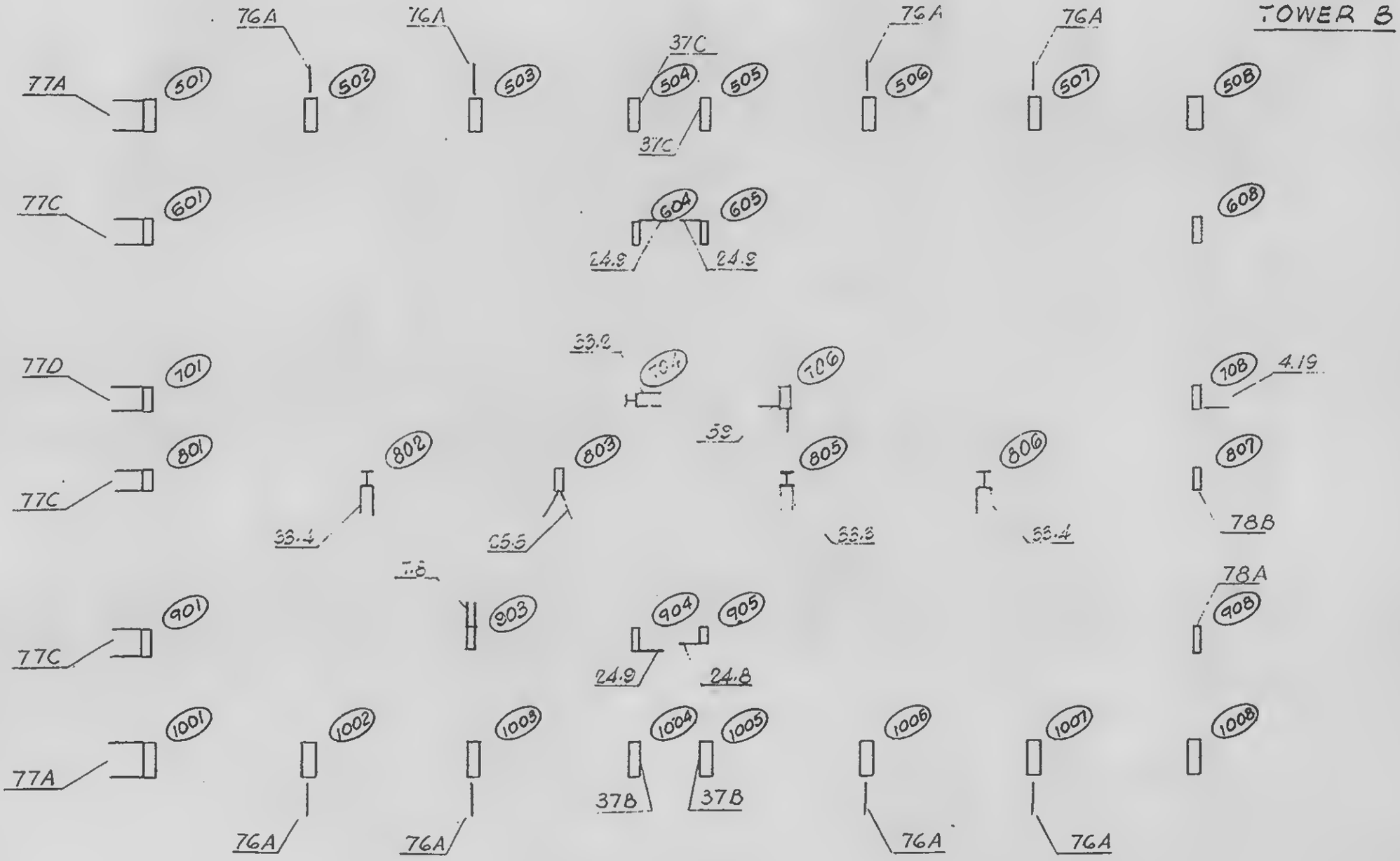
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOOR 10 | DATE: 10-1-69

REVISIONS

NORTH

TOWER B



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DRAWN
S.T.M.

REVIEWED

18-B1-15.2

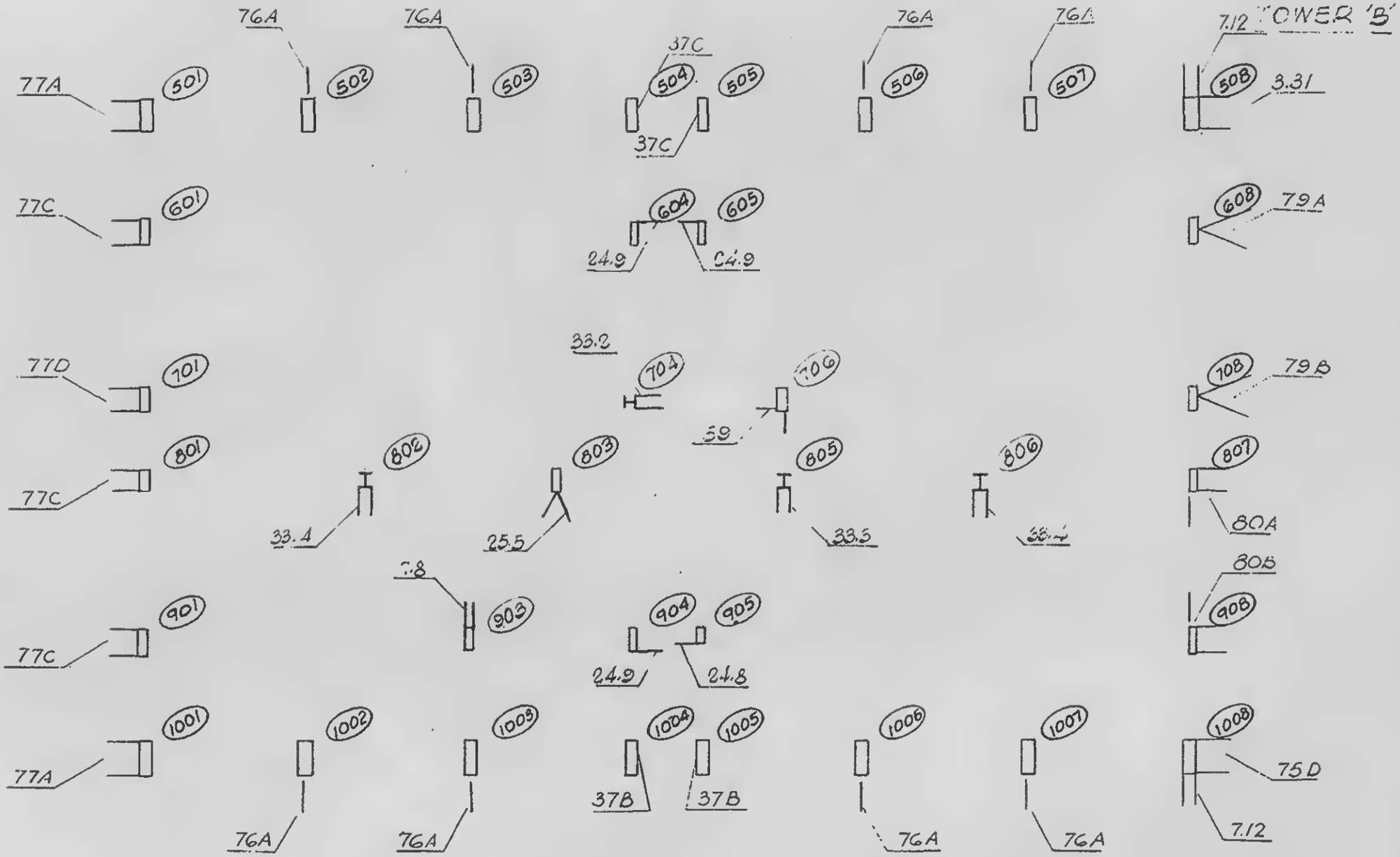
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOOR 11 | DATE: 10-1-69

REVISIONS

NORTH

TOWER 'B'



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DRAWN
S.T.M.

REVIEWED

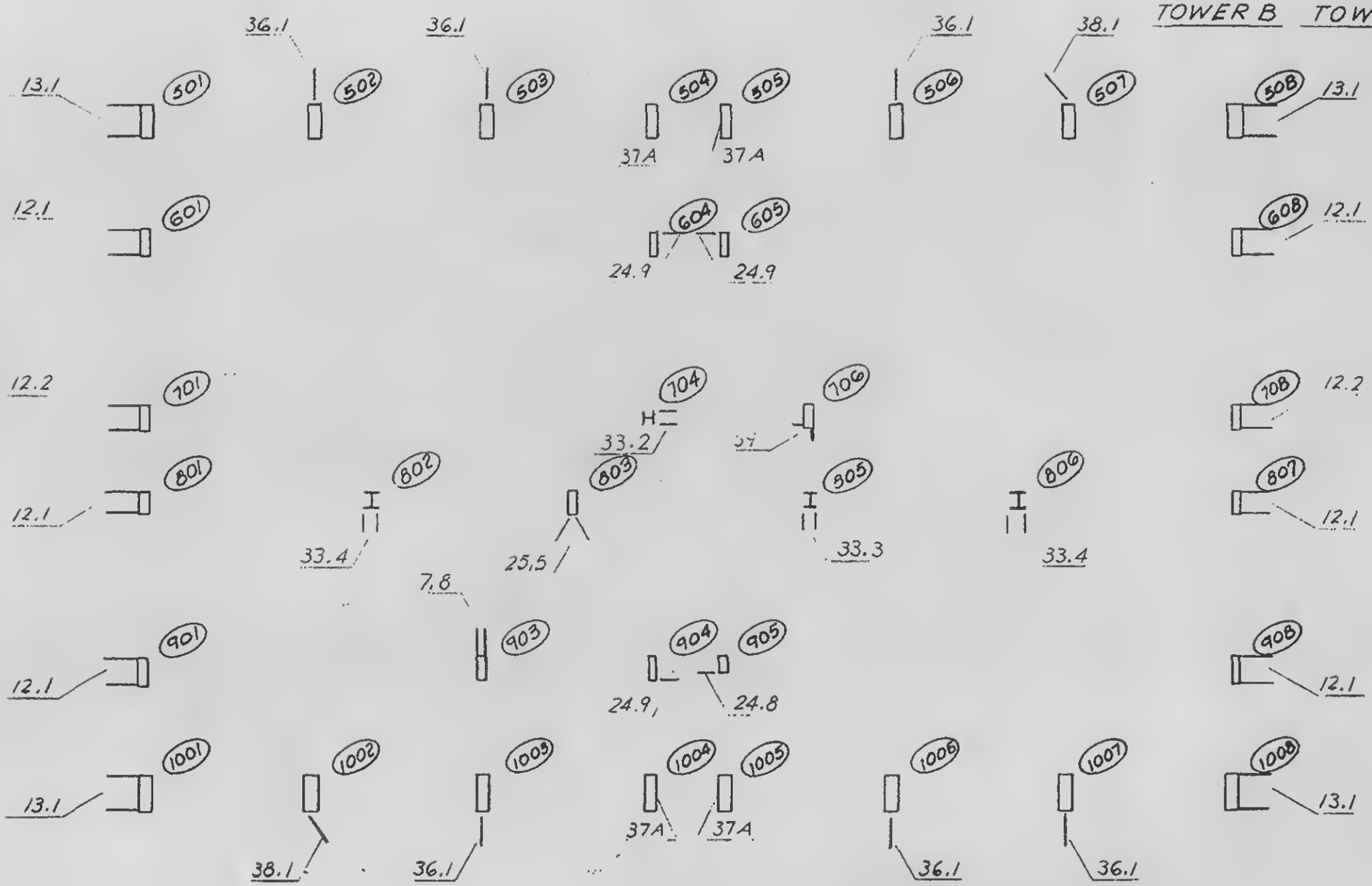
18-51-15.3

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS-KEY PLANS-FLR.12-17 TOWER A-FLR.14-17 TOWER B | DATE 2-7-69

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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DRAWN F. Smith
REVIEWED W. Brewer

18-AB1-16.1

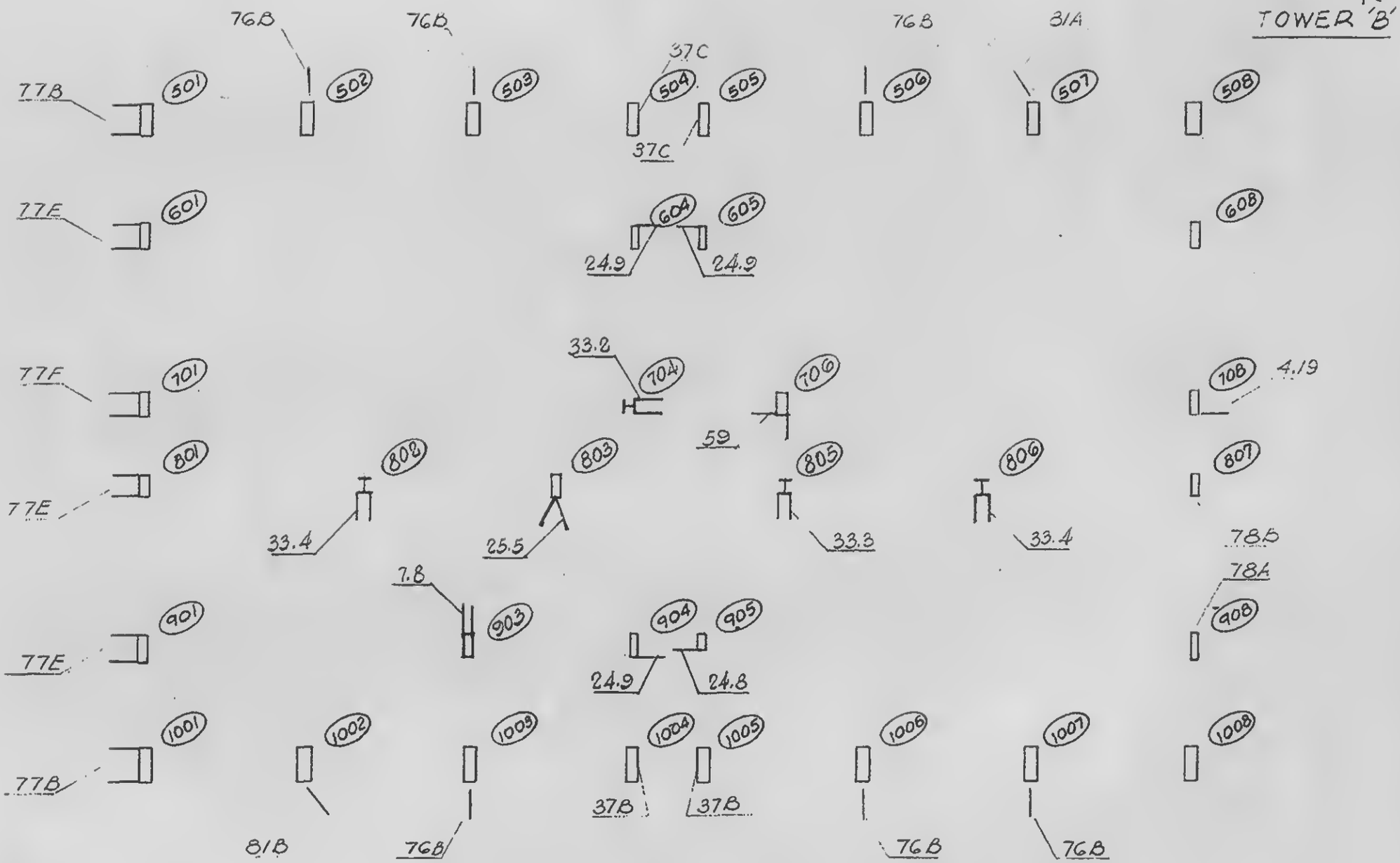
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOOR 12 | DATE: 10-1-69

REVISIONS

NORTH

TOWER 'B'



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DRAWN S.T.M.

REVIEWED

18-81-16.2

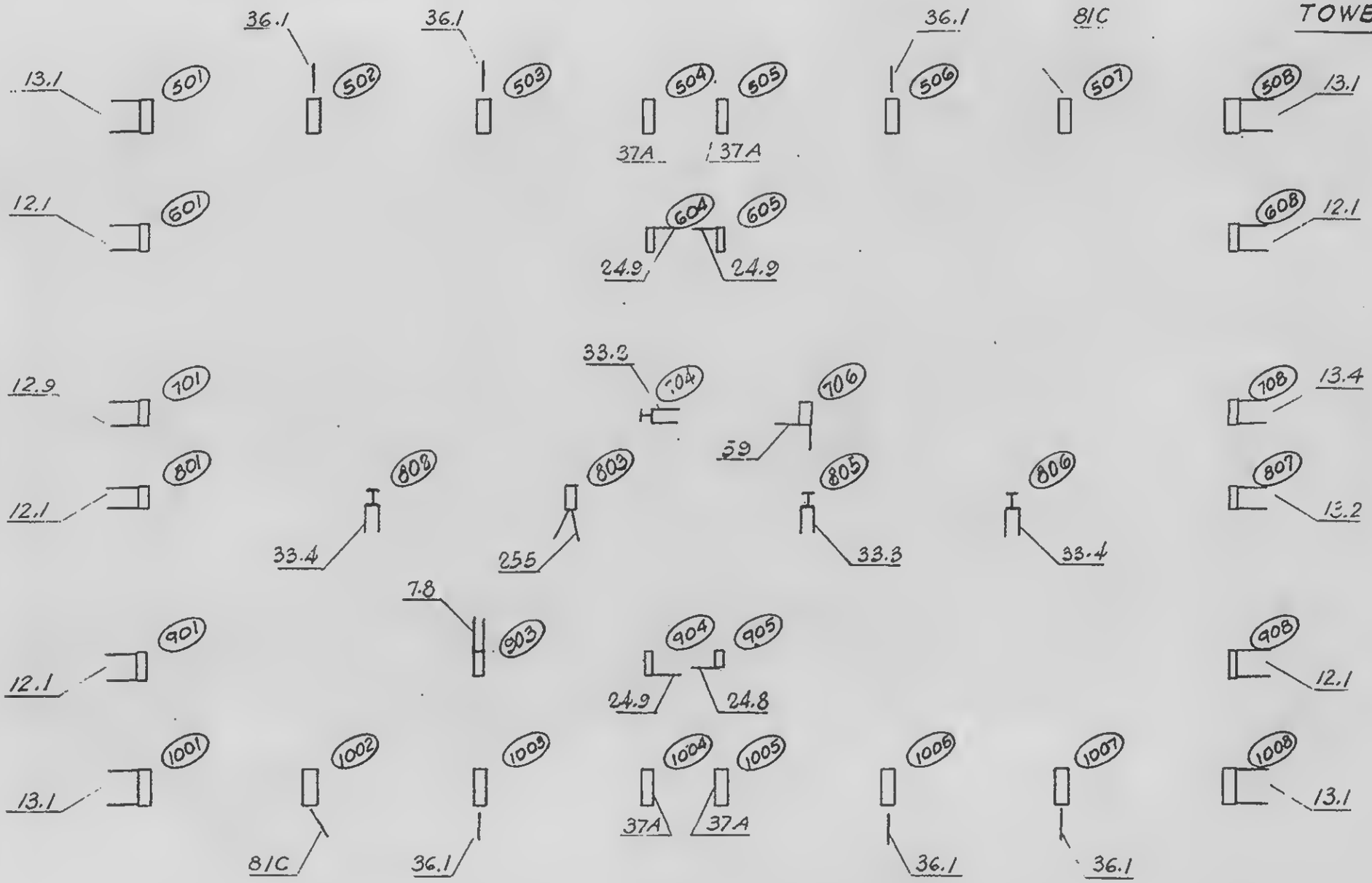
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 13 | DATE 10-1-69

REVISIONS

NORTH

TOWER '8'



DESIGNED

DRAWN S.T.M.

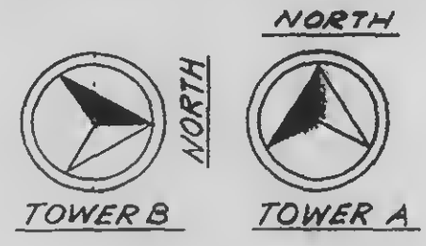
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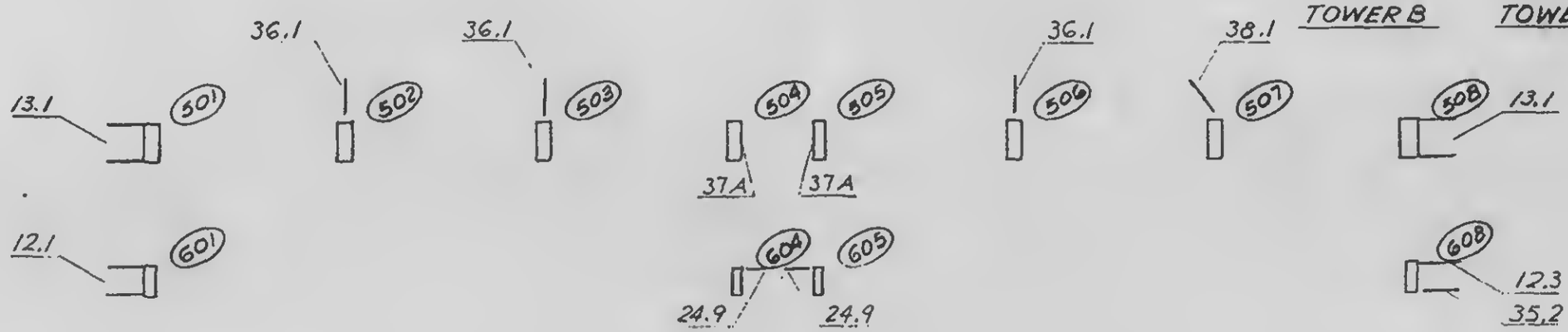
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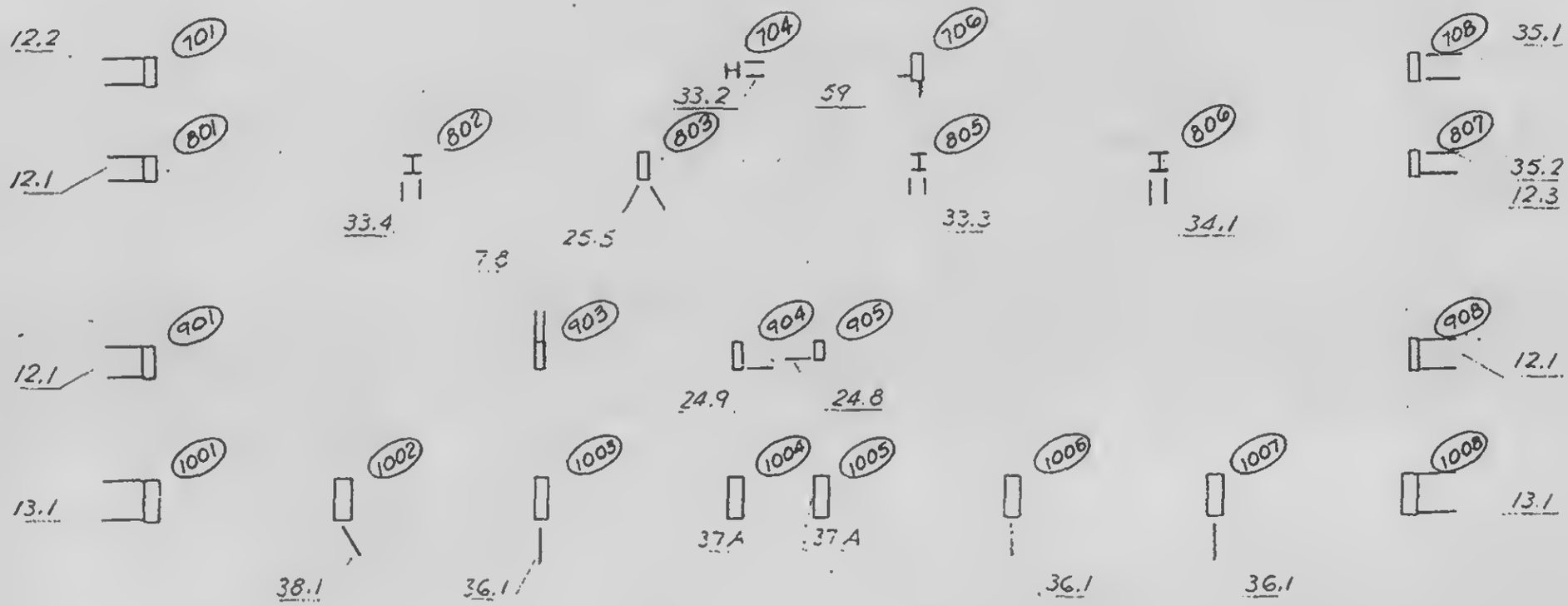
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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 19 | DATE 2-7-69

REVISIONS







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No. 34360
CITY OF THE STATE OF NEW YORK

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DRAWN F. Smith
REVIEWED

18-AB1-17

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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOORS 19 - 26 | DATE: 2-7-69

REVISIONS

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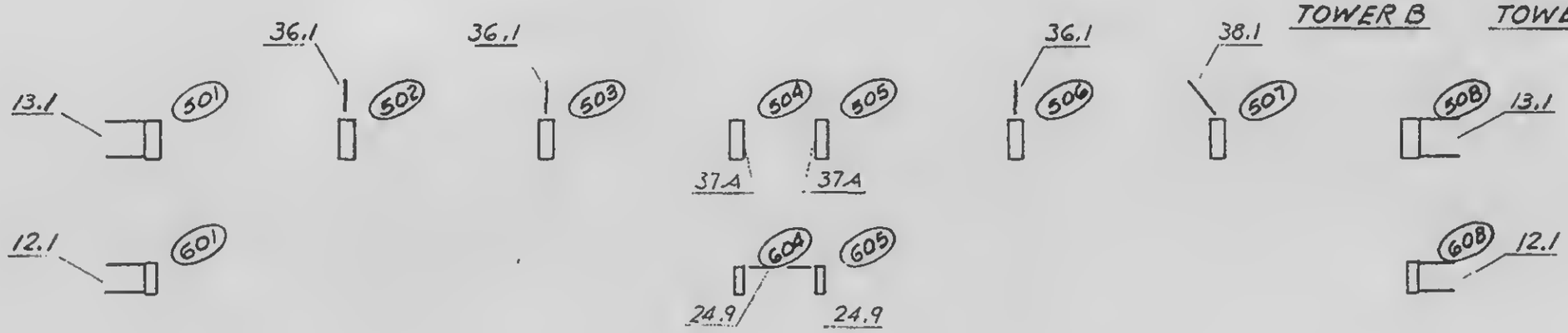


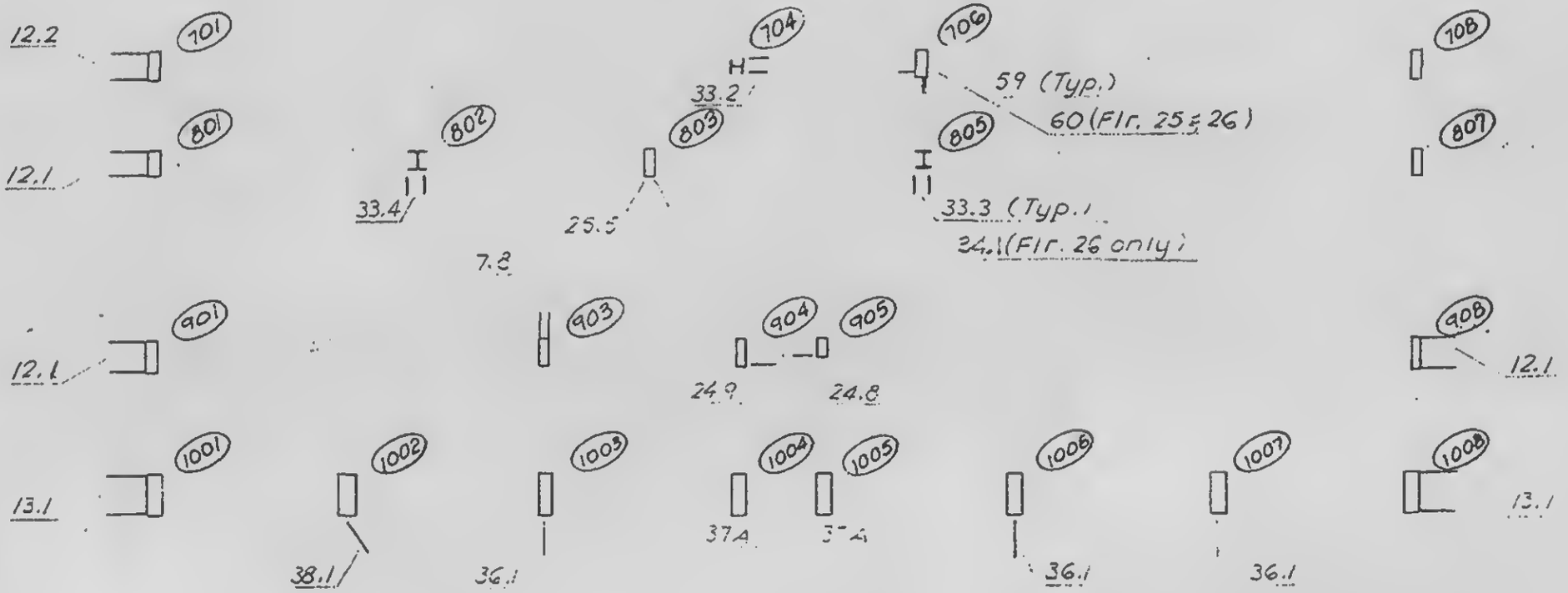
NORTH



TOWER B

TOWER A





LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
STATE OF NEW YORK

CHECKED: Fig. 19

DRAWN: F. Smith

REVIEWED: J. Brenner

18-A3.-1E

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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOORS 27-33 | DATE: 2-7-69

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No. 34360
CITY OF THE STATE

APPROVED
J. O'Neill

DRAWN
F. Smith

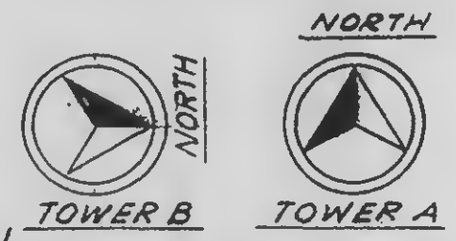
REVIEWED
W. Brewer

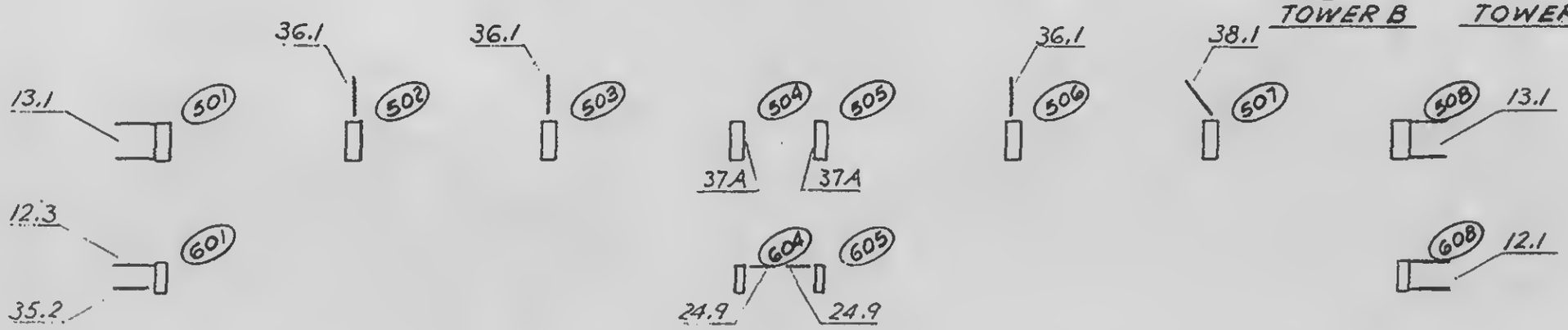
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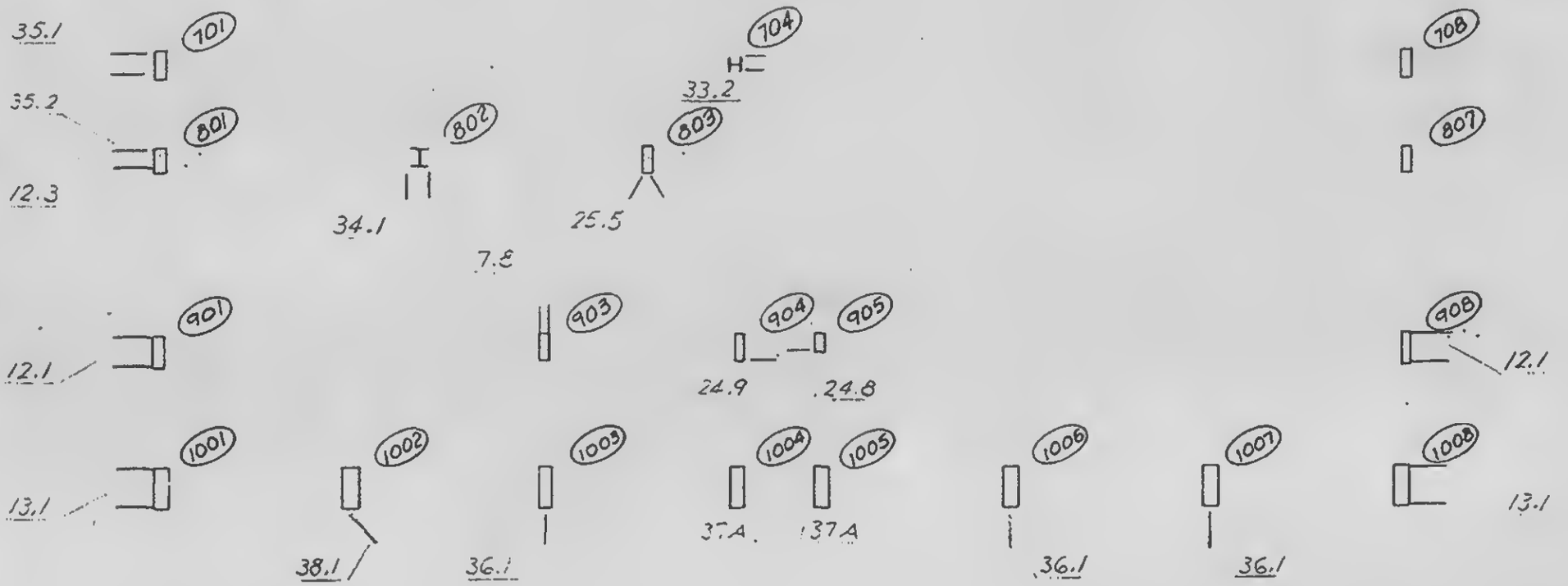
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOOR 34 | DATE: 2-7-69

REVISIONS







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DESIGNED: J. O'Neill

DRAWN: F. Smith

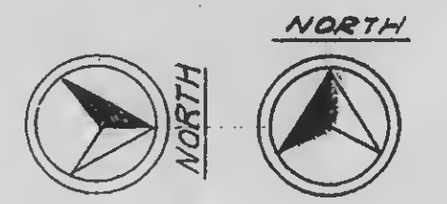
REVIEWED: D. Brewer

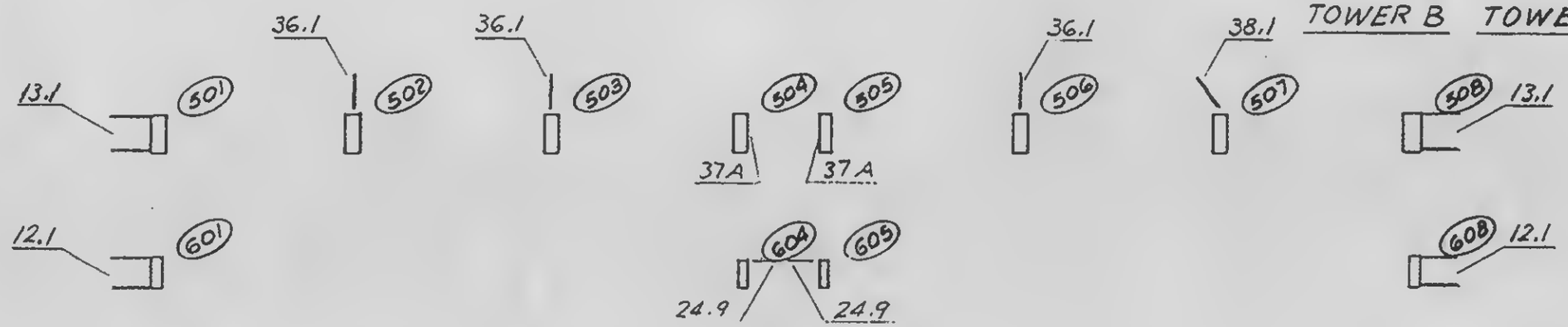
18 - AB1 - 20

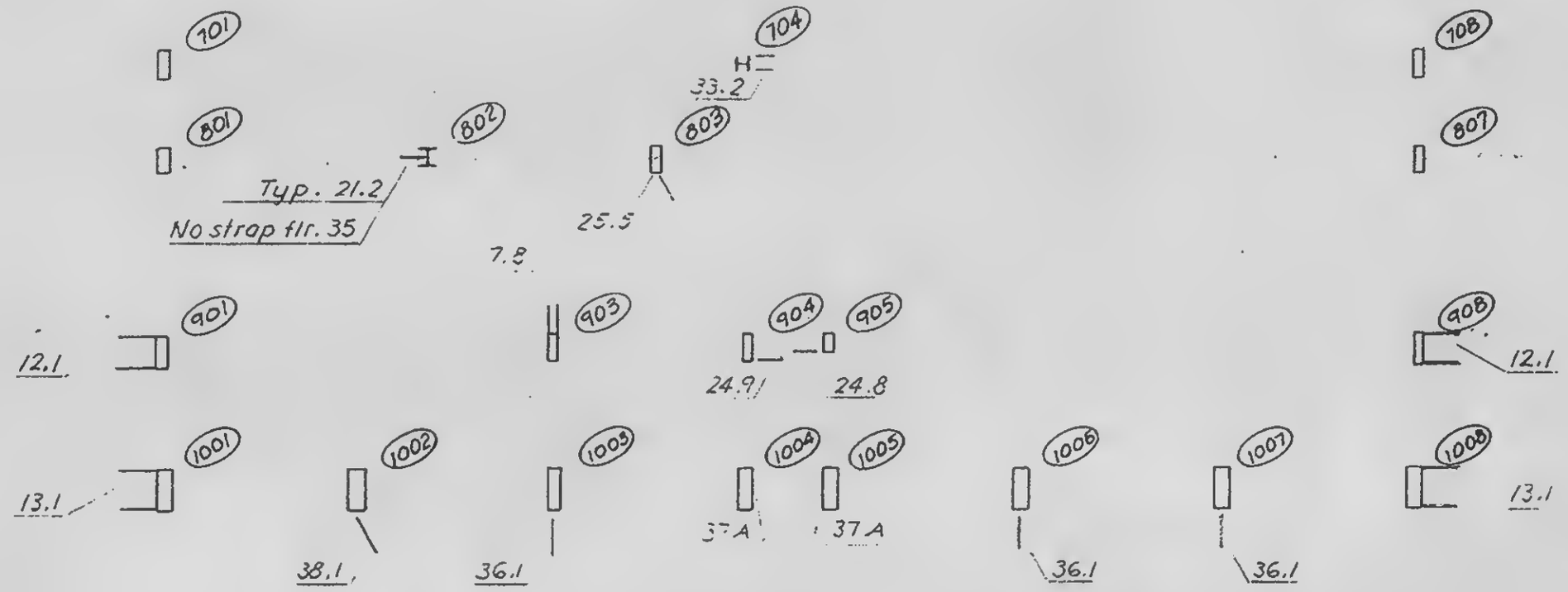
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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOORS 35 - 38 | DATE 2-7-69

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LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
STATE OF NEW YORK

ID
Leslie Robertson

DRAWN
T. Smith

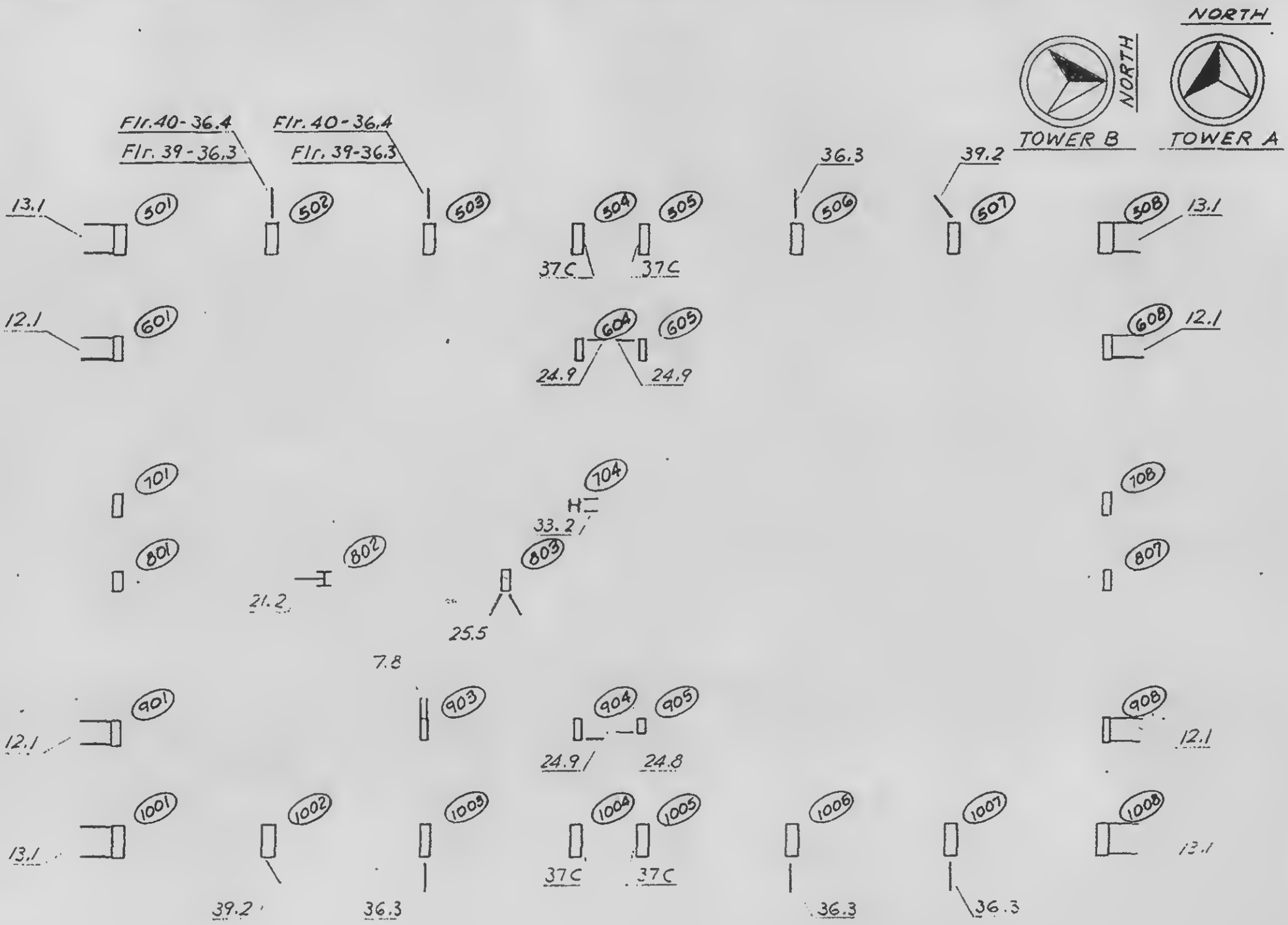
REVIEWED
W. Brewer

18-A81-21

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 39 & 40 | DATE 2-7-69

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK
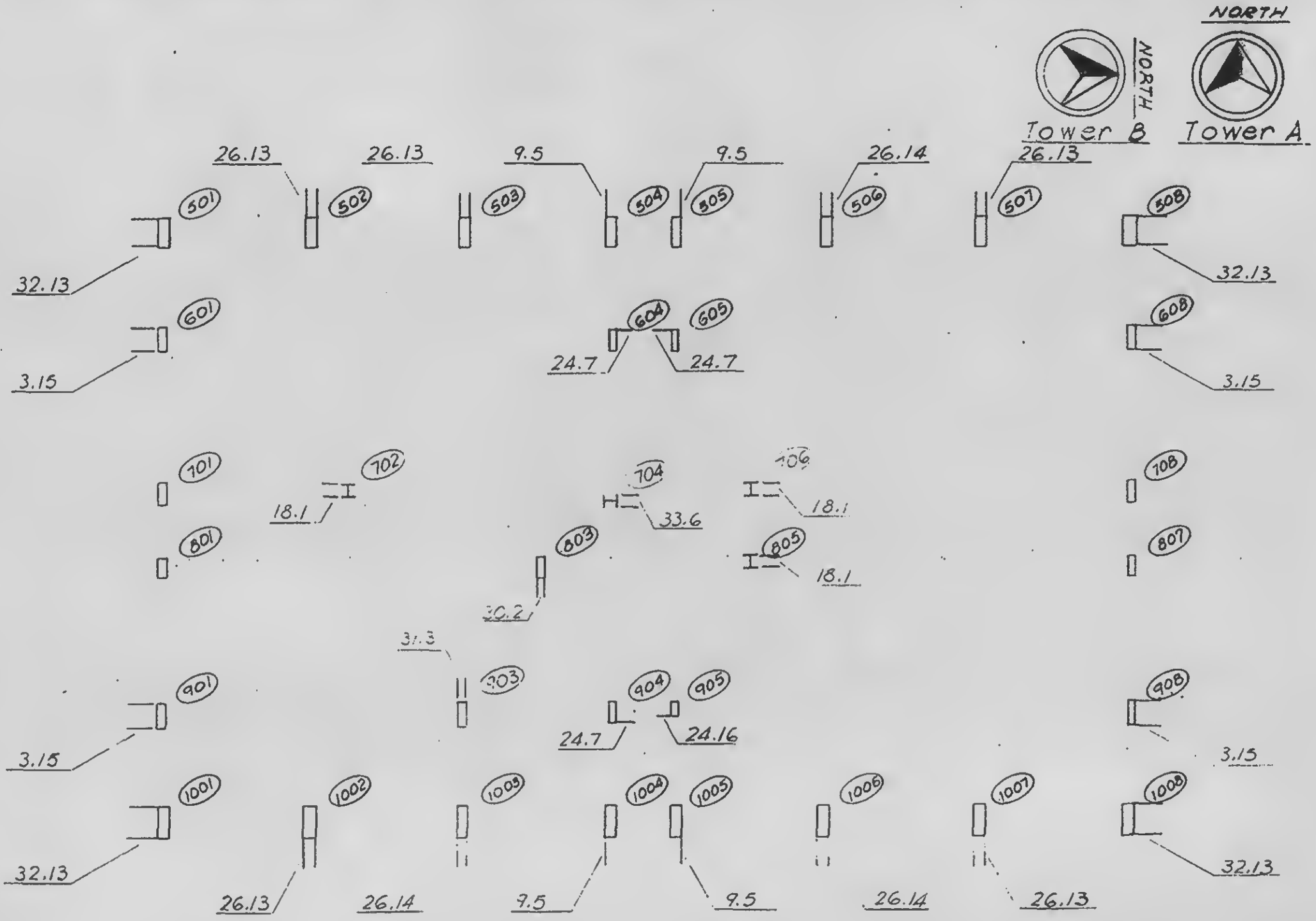
SIGNED
DRAWN F. Smith
REVIEWED W. Brewster

18 · AE 1 - 22

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - KEY PLANS - FLOOR 41 | DATE: 5-28-69

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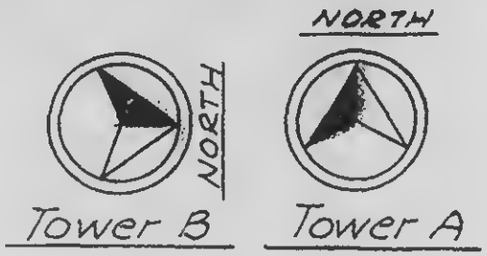
REVIEWED

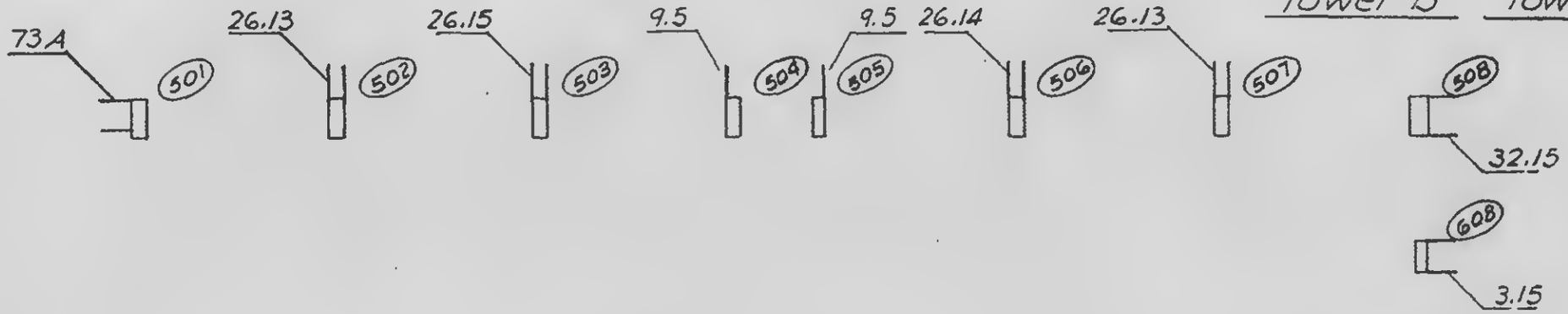
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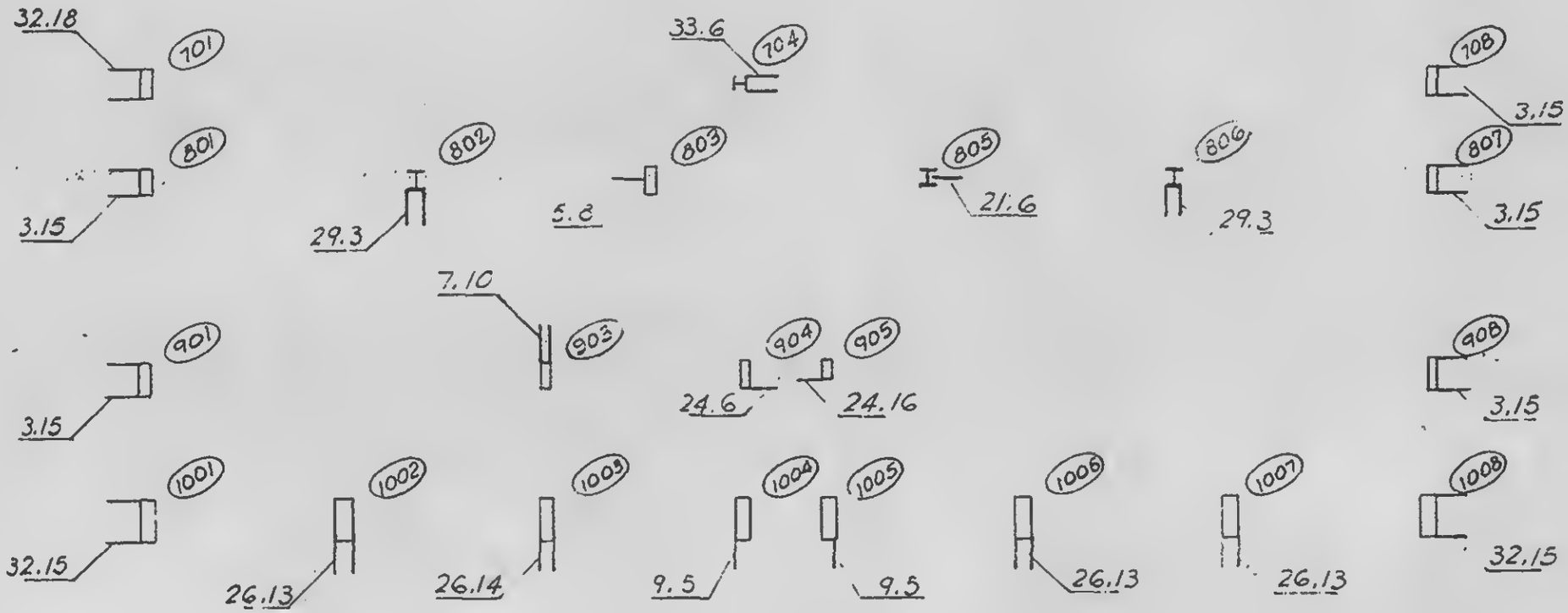
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS- FLOOR 43 | DATE 5-28-69

REVISIONS







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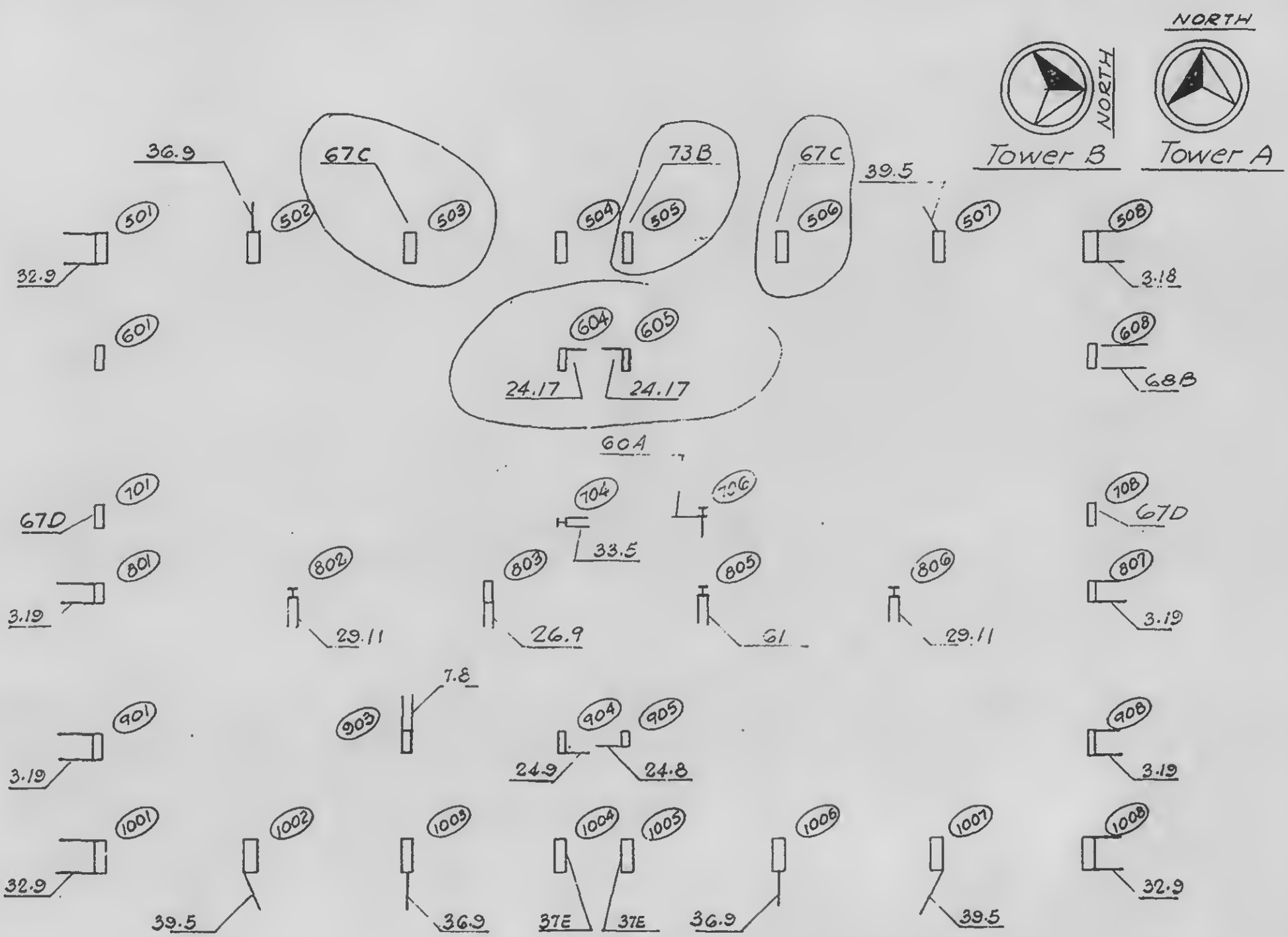
REVIEWED

18-48-24

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: KEY PLAN FOR ANCHOR STRAPS- FLOOR 44 | DATE: 4-30-69

REVISIONS
J-28-69



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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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S.T.M.

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W. Brewer

18-AB1-25

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PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS- FLOOR 45 | DATE 4-30-69

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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DRAWN S.T.M.

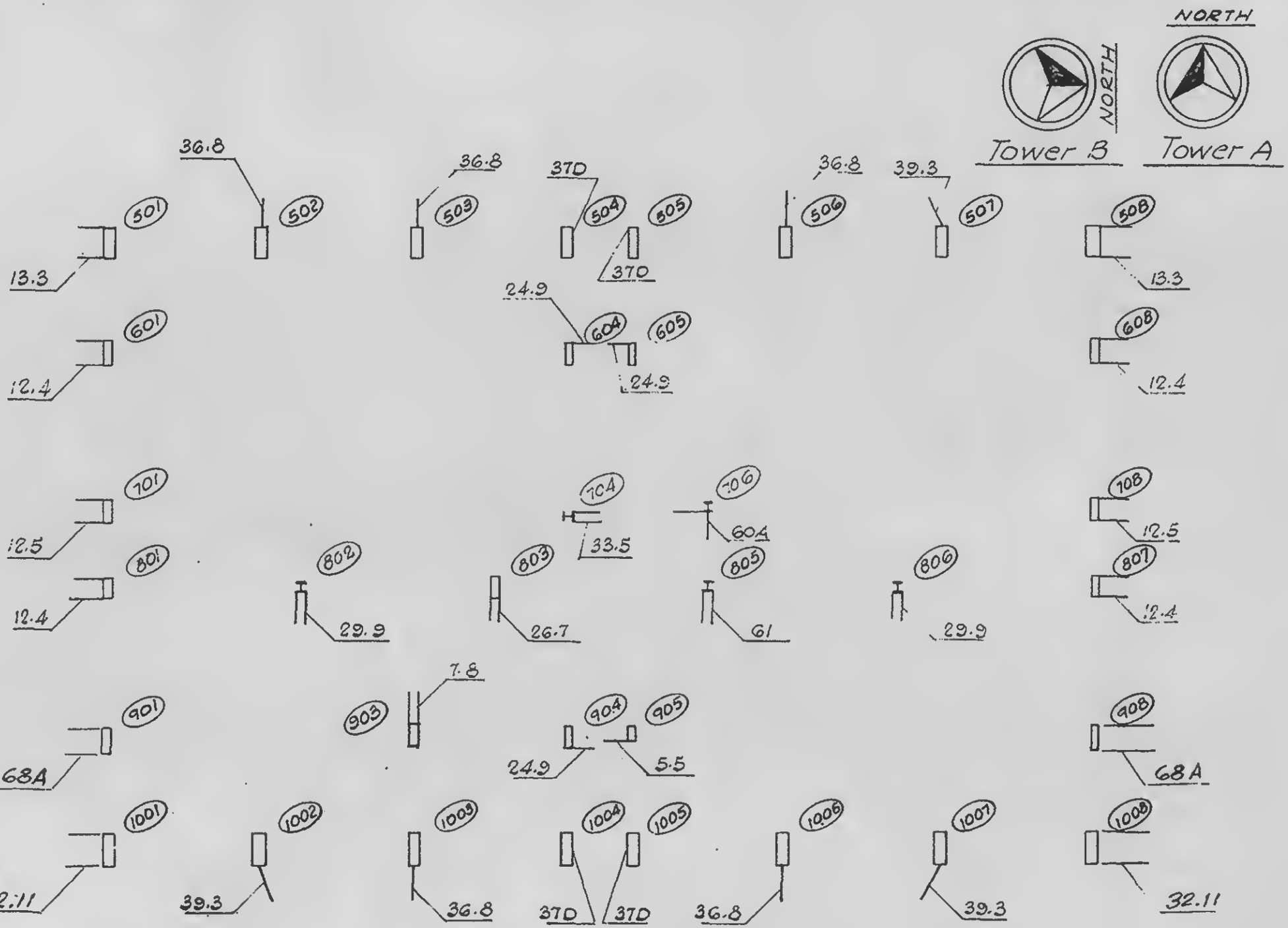
REVIEWED W. Brewer

18-AB1-26

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS- FLOOR 46 | DATE 4-30-69

REVISIONS



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LESLIE E. ROBERTSON
No. 34860
UNIVERSITY OF THE STATE OF NEW YORK

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DRAWN STM

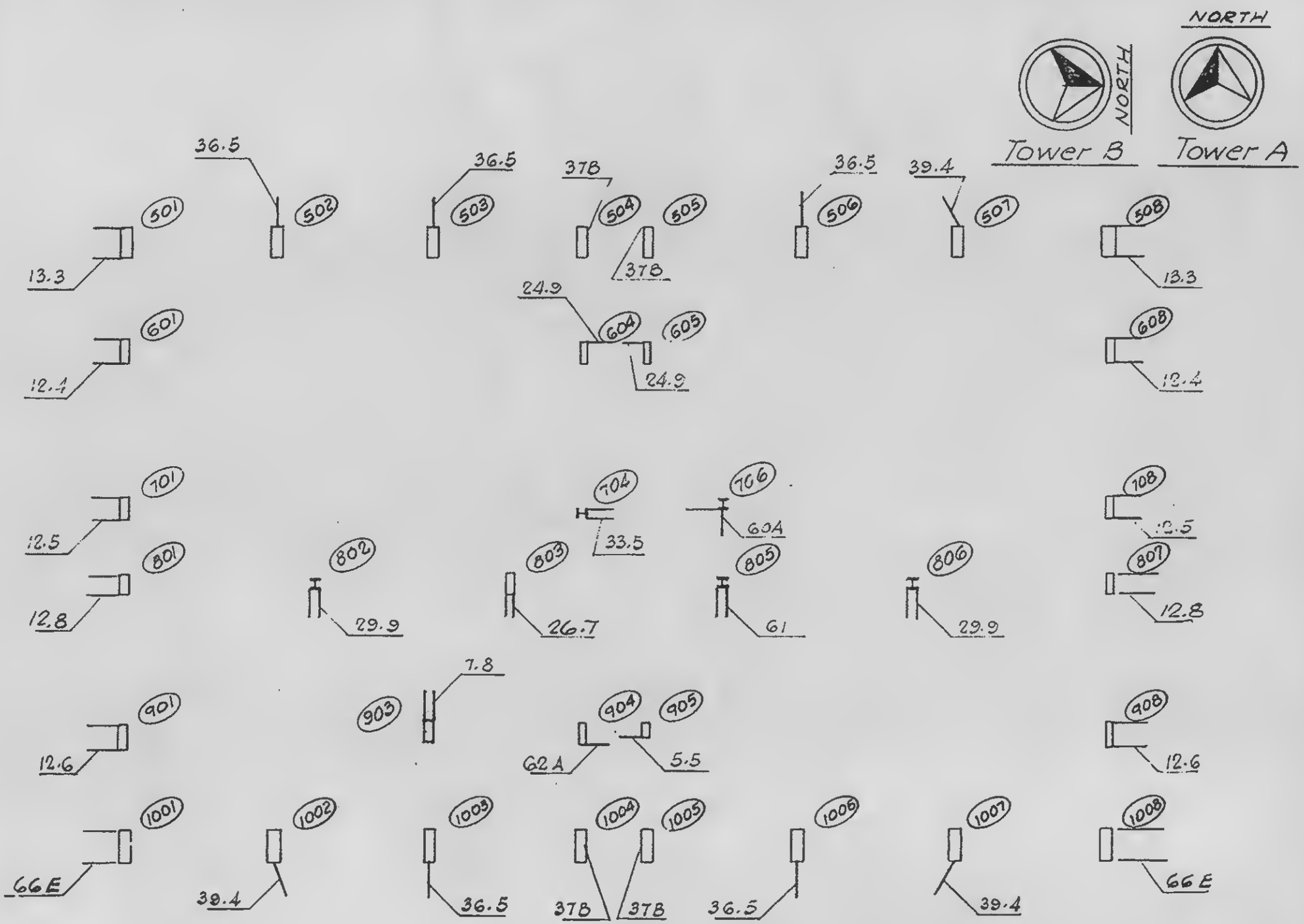
REVIEWED W. Brewer

18-AB1-27

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS- FLOOR 47 | DATE 4-30-69

REVISIONS



LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
CITY OF THE STATE OF NEW YORK

DRAWN S.T.M.

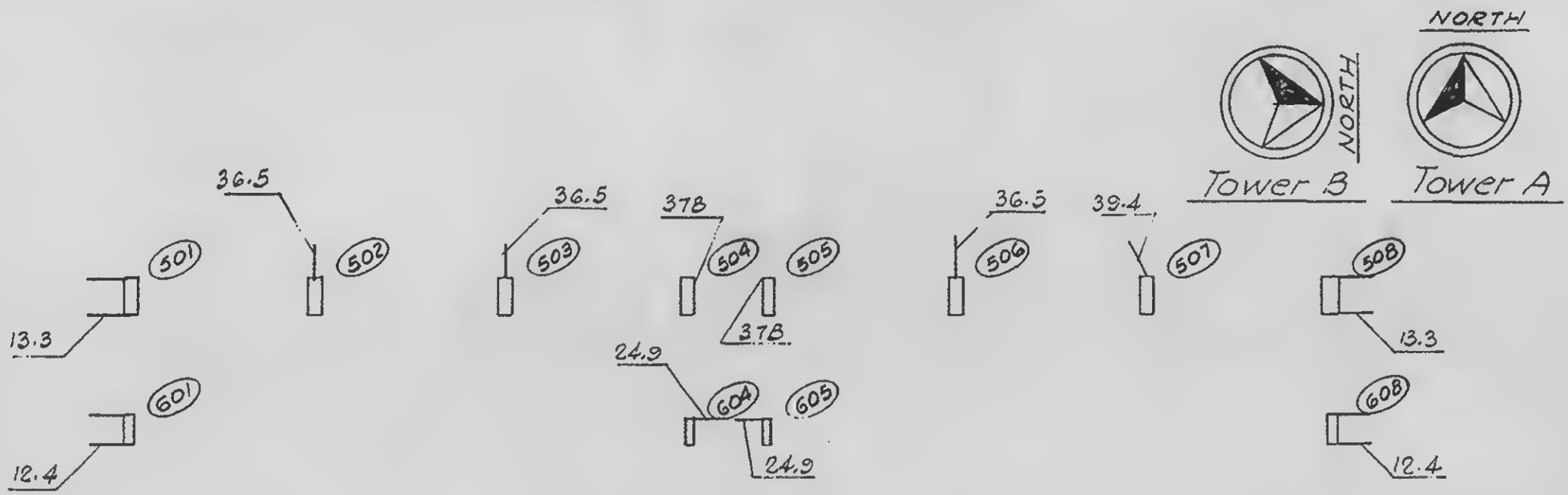
REVIEWED O. Brewer

18-AB1-28

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS- FLOOR 48 | DATE 4-30-69

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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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DRAWN S.T.M.

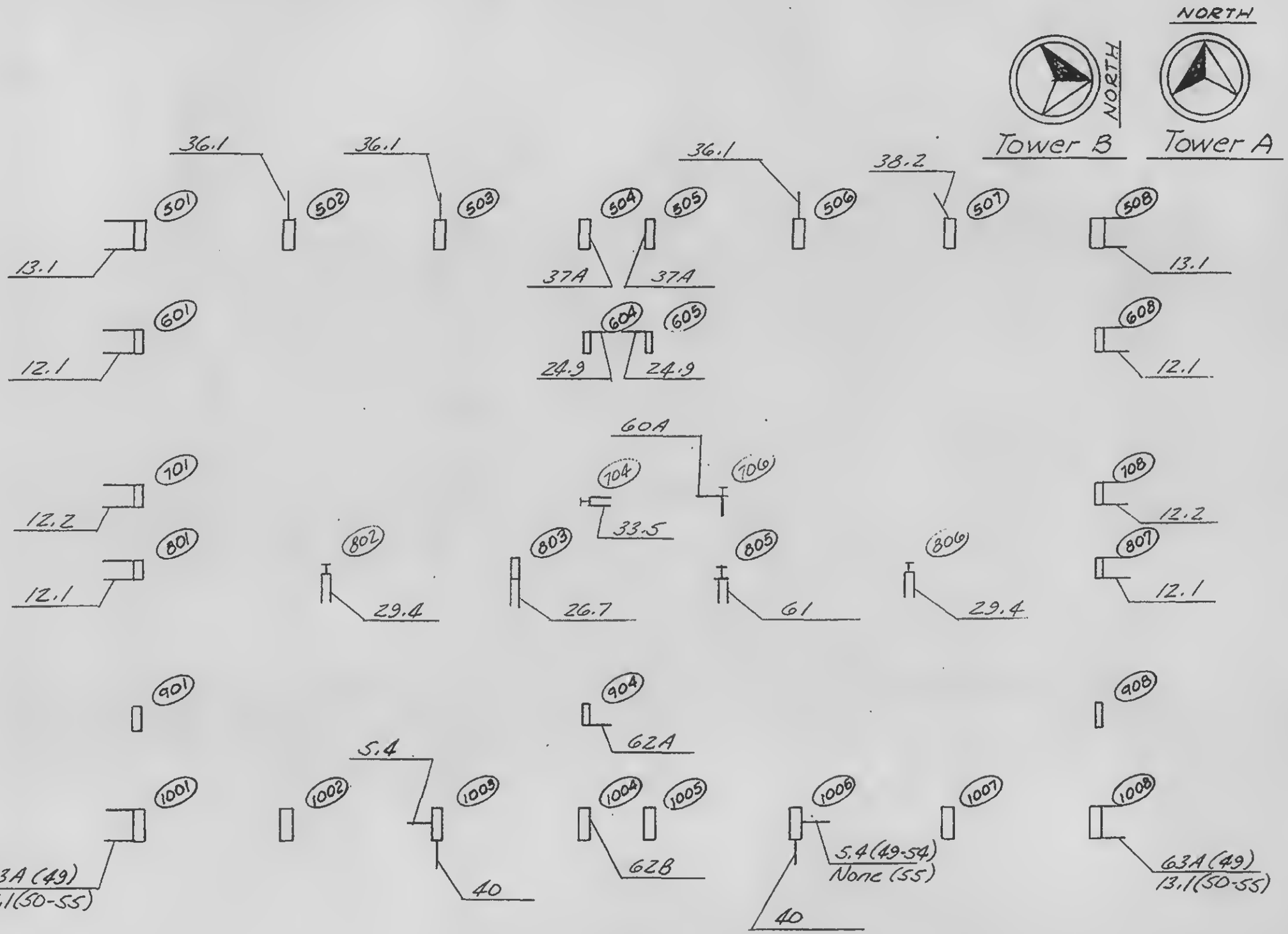
REVIEWED W. Brewer

18-AB1-29

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 49-55 | DATE 4-30-69

REVISIONS



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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED

DRAWN J. Adams

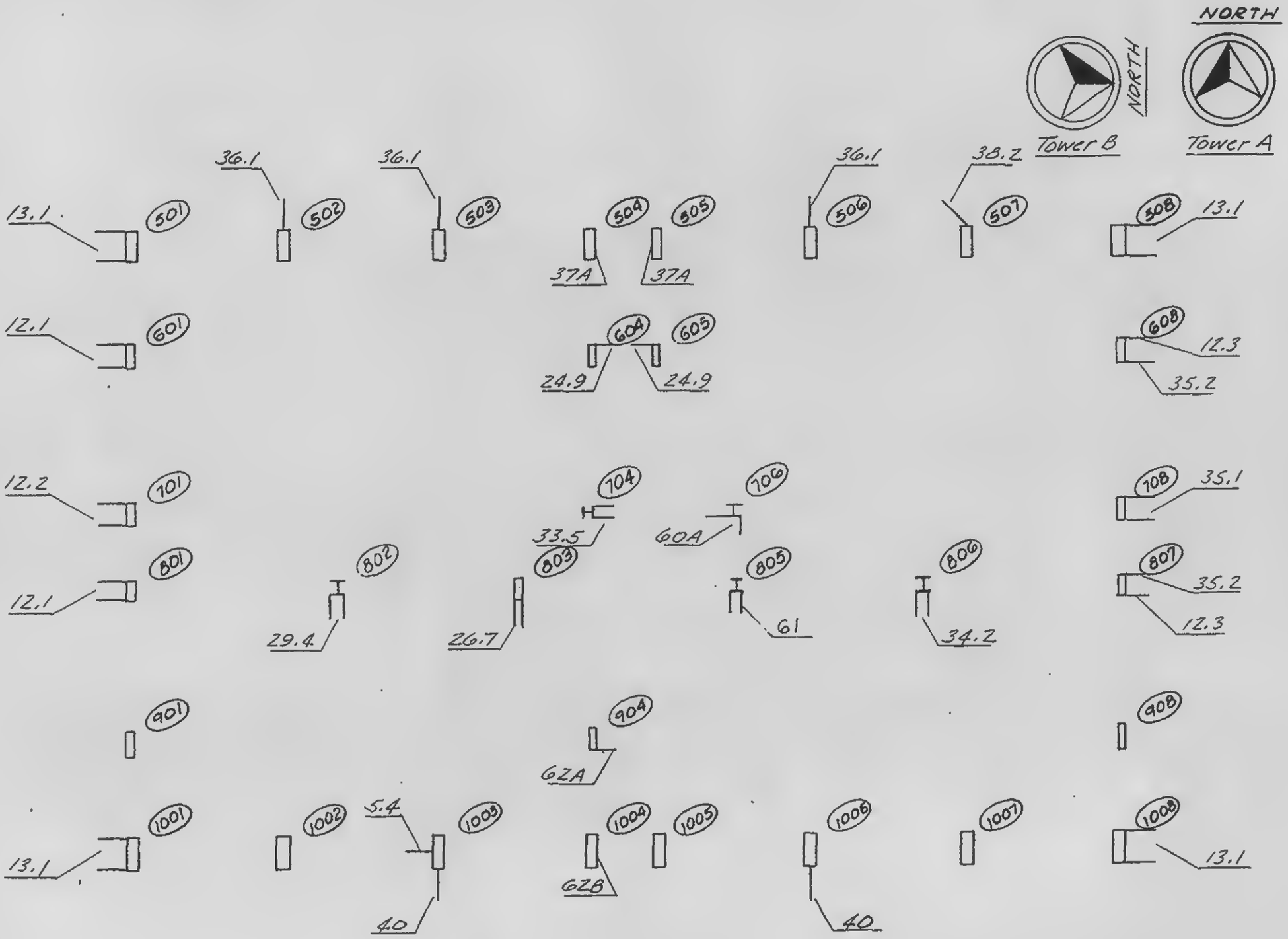
REVIEWED W. Brewer

18-AB1-30

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 56 | DATE 4-30-69

REVISIONS



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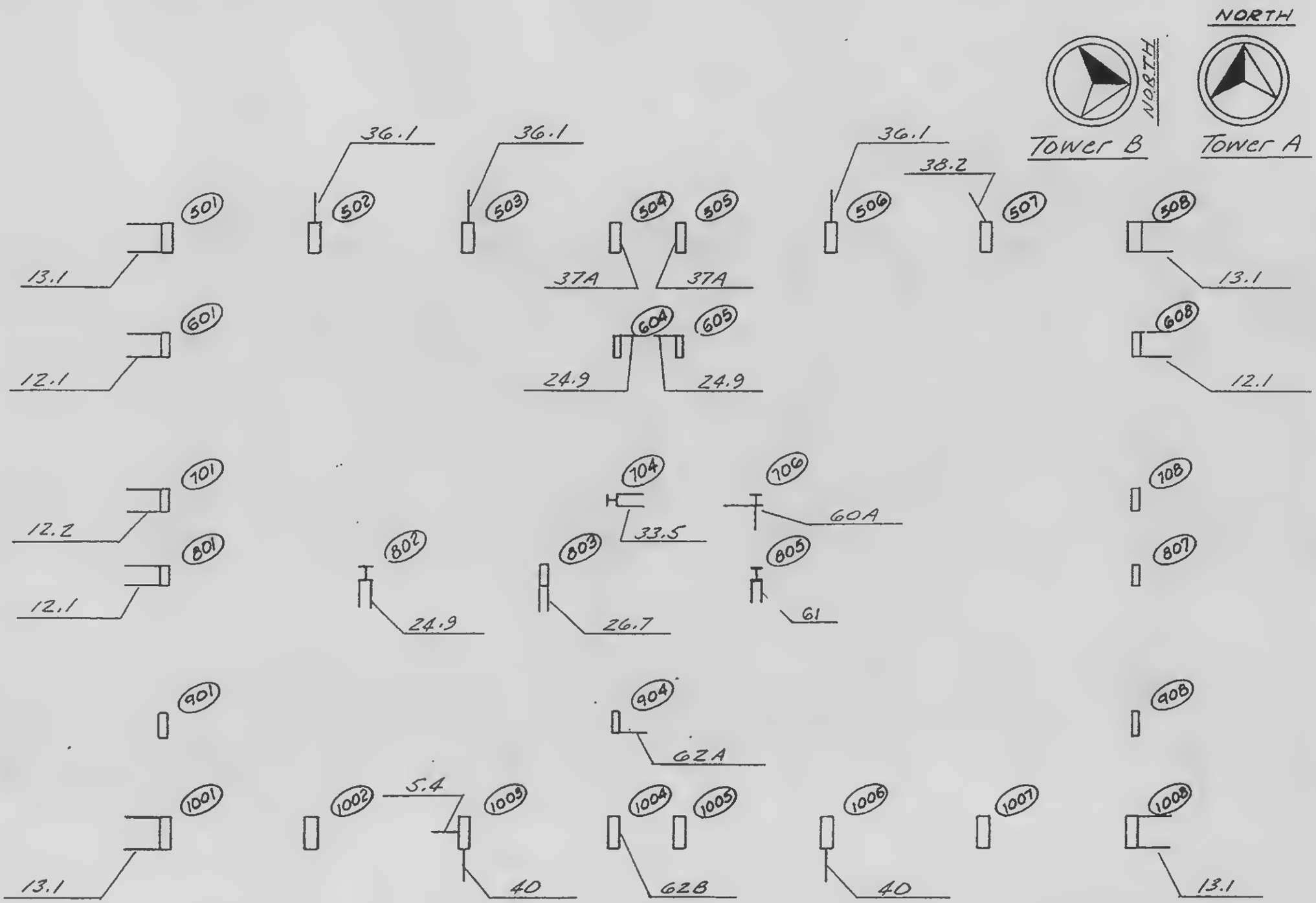
REVIEWED C.W. Brewer

18-AB1-31

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 57. | DATE 4-30-69

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18-AB1-32

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FL 58-59 | DATE 4-30-69

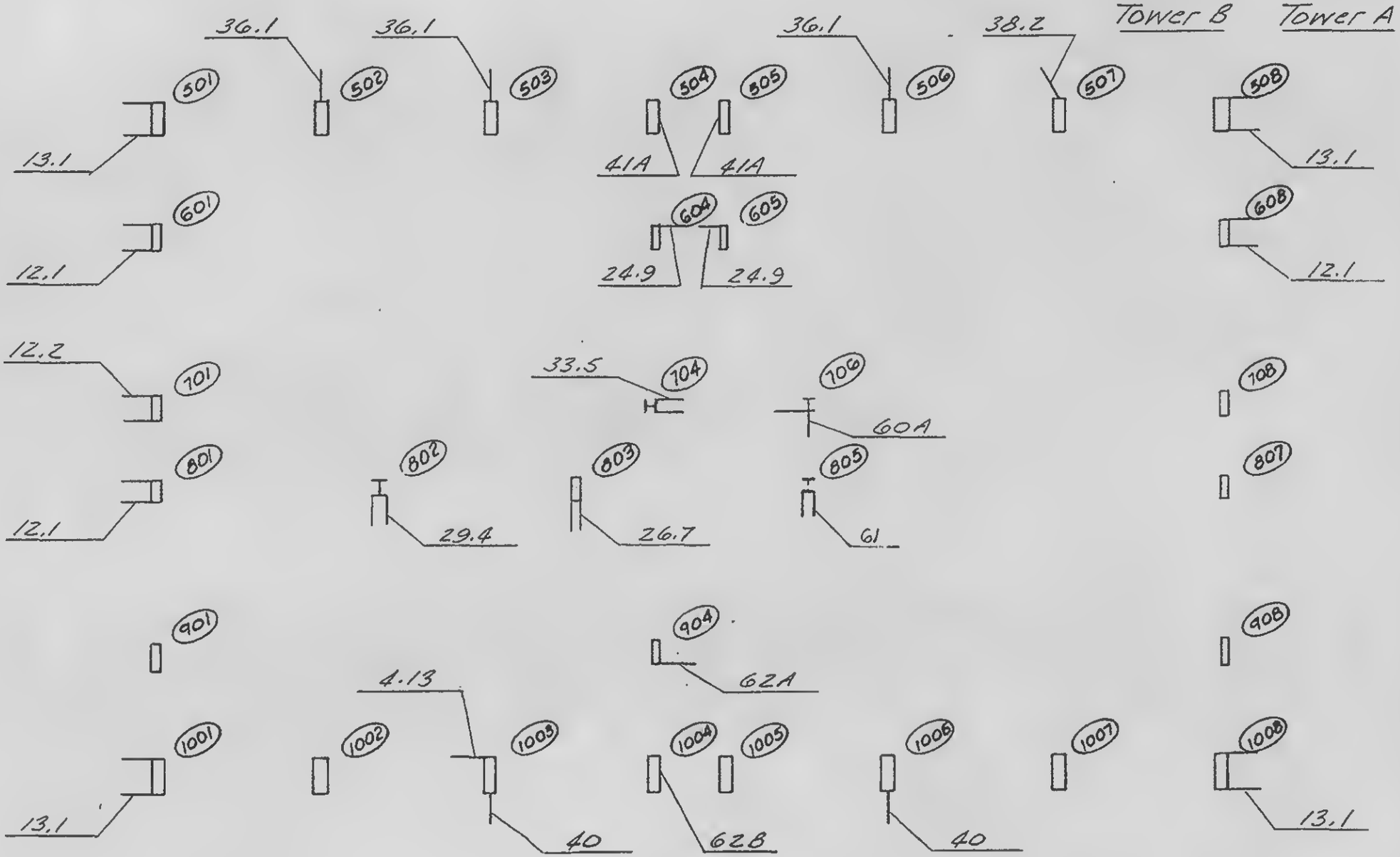
REVISIONS

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Tower B

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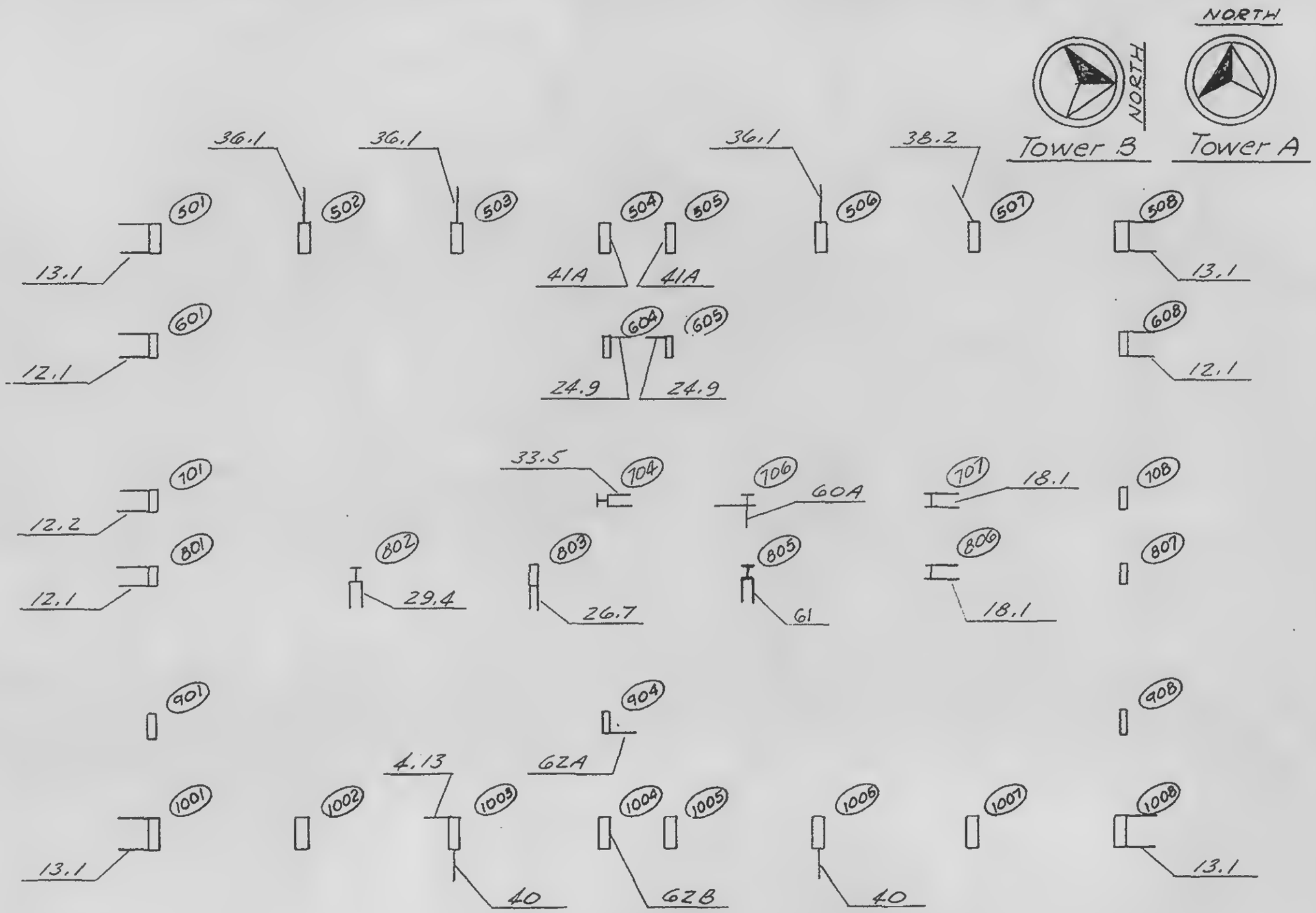
REVIEWED W. Brewer

18-AB1-33

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS - FL 60 | DATE 4-30-69

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18-AB1-34

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 61-63 | DATE 4-30-69

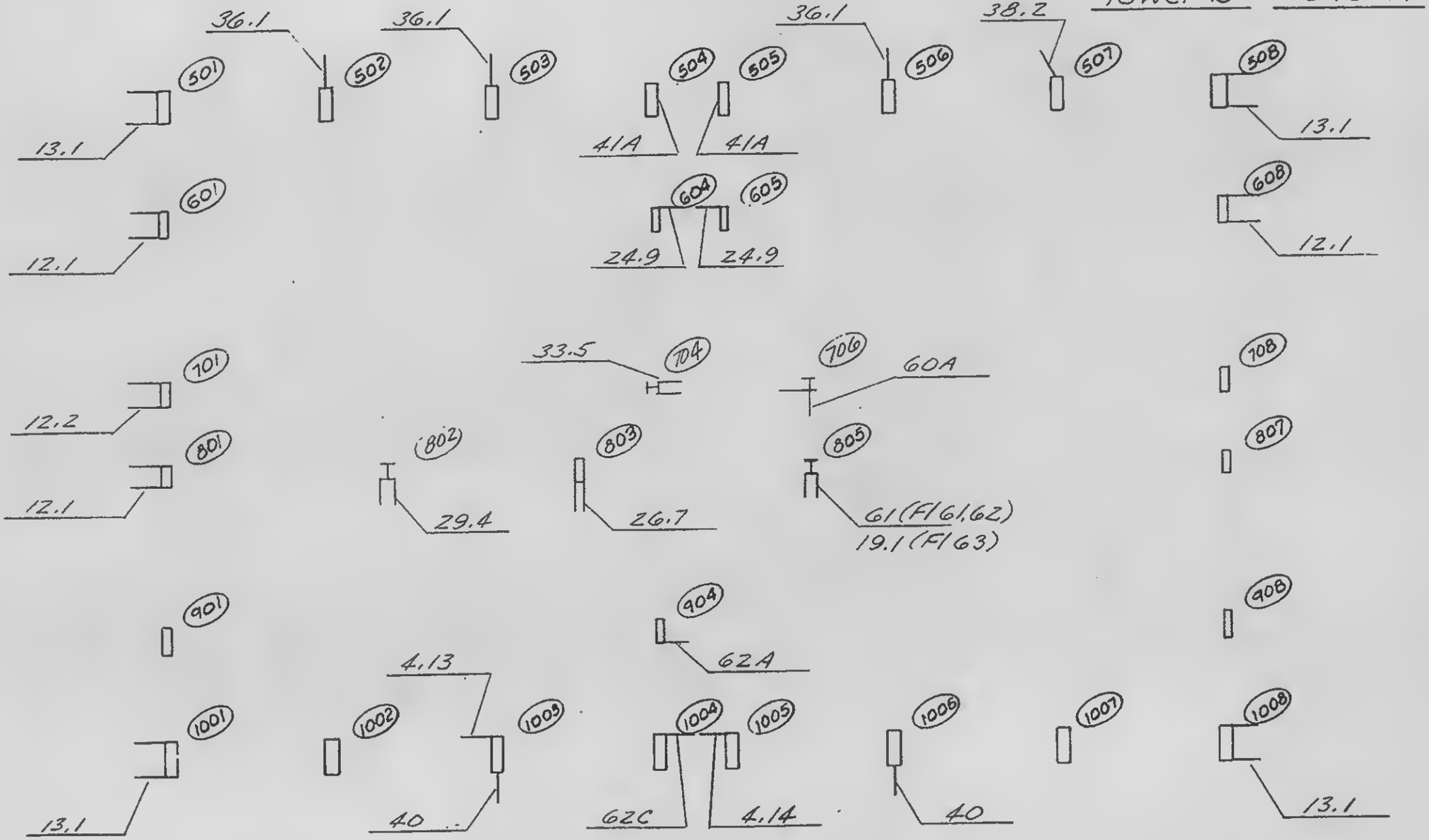
REVISIONS

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Tower A



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18-AB1-35

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PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 64-66 | DATE 4-30-69

REVISIONS

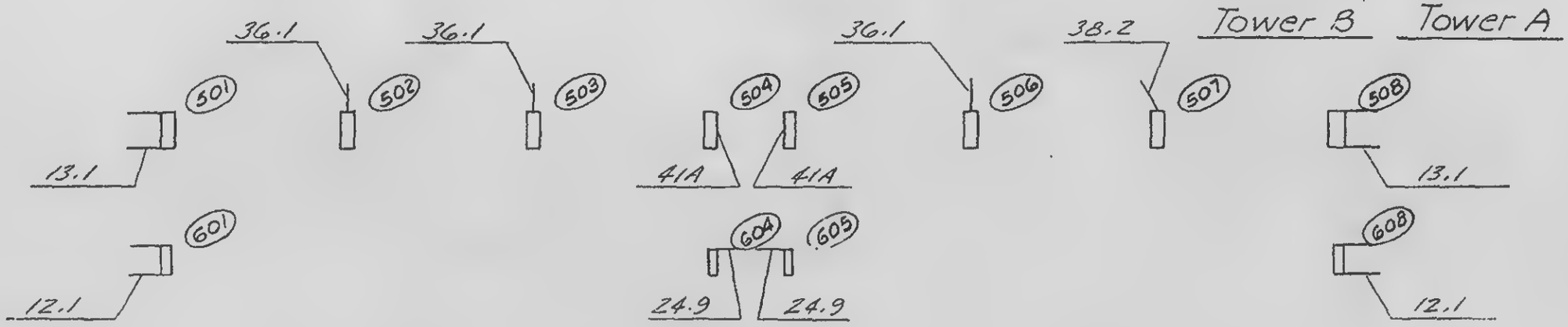
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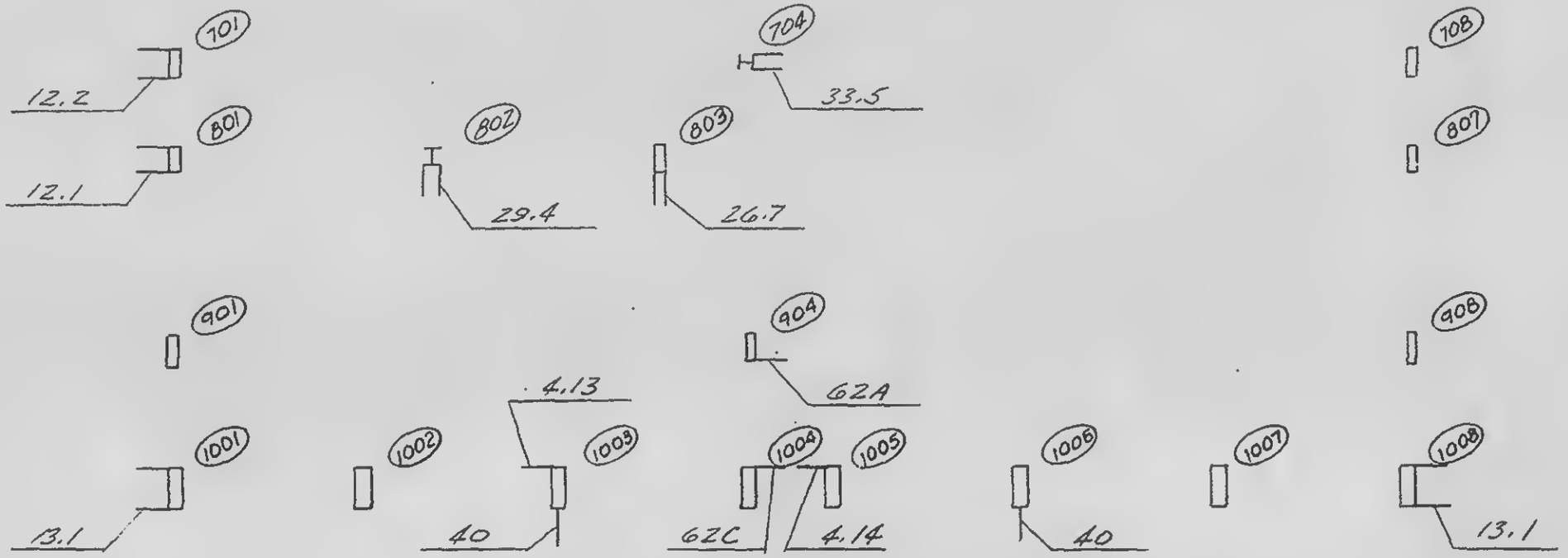


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Tower B — Tower A





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18-A81-36

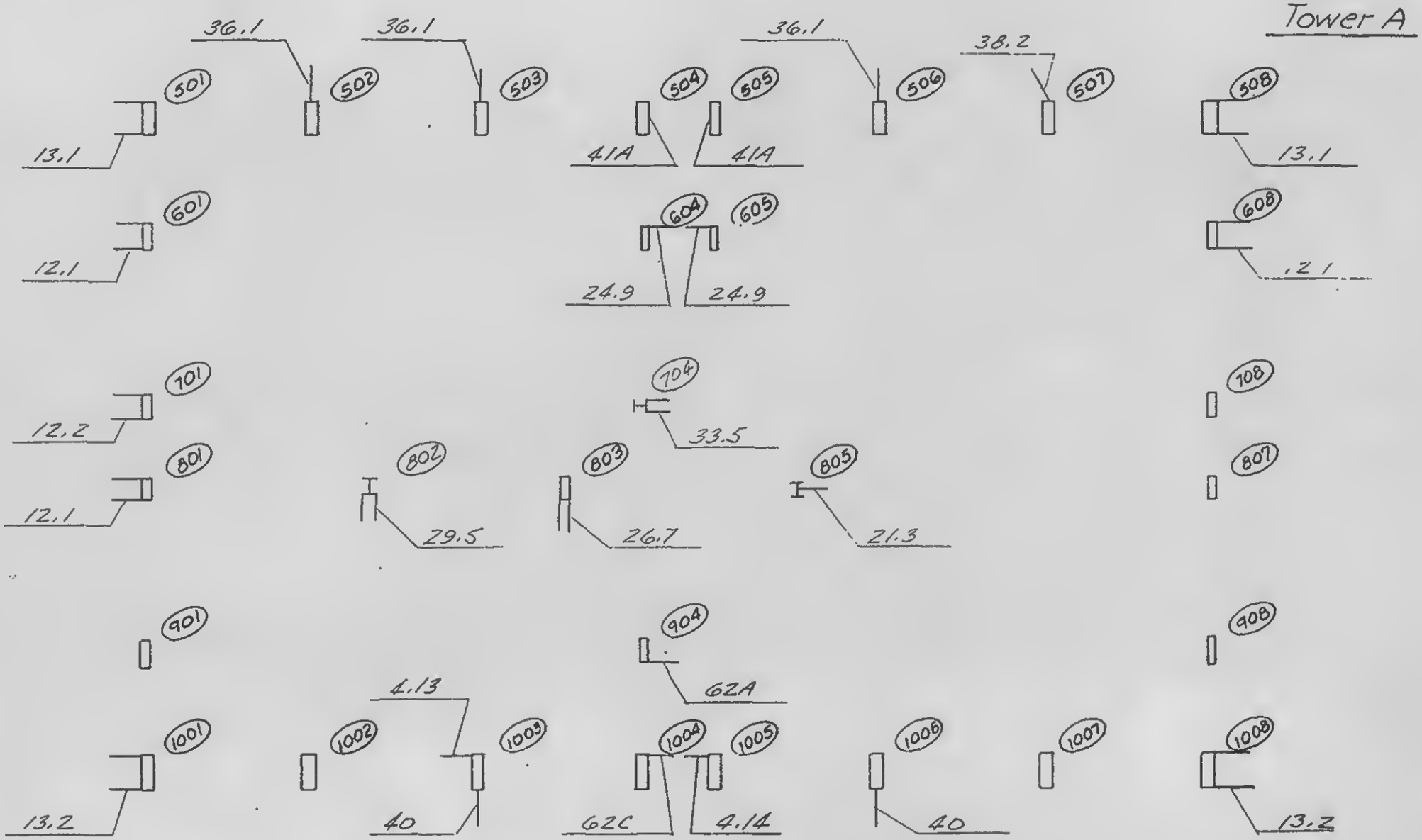
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 67-68-TOWER A | DATE 4-30-69

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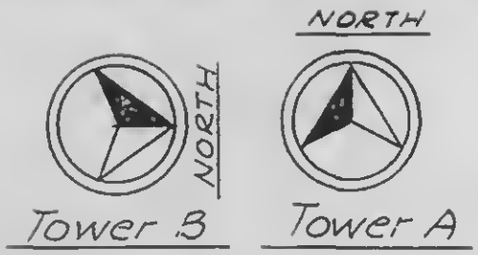
REVIEWED W. Brewer

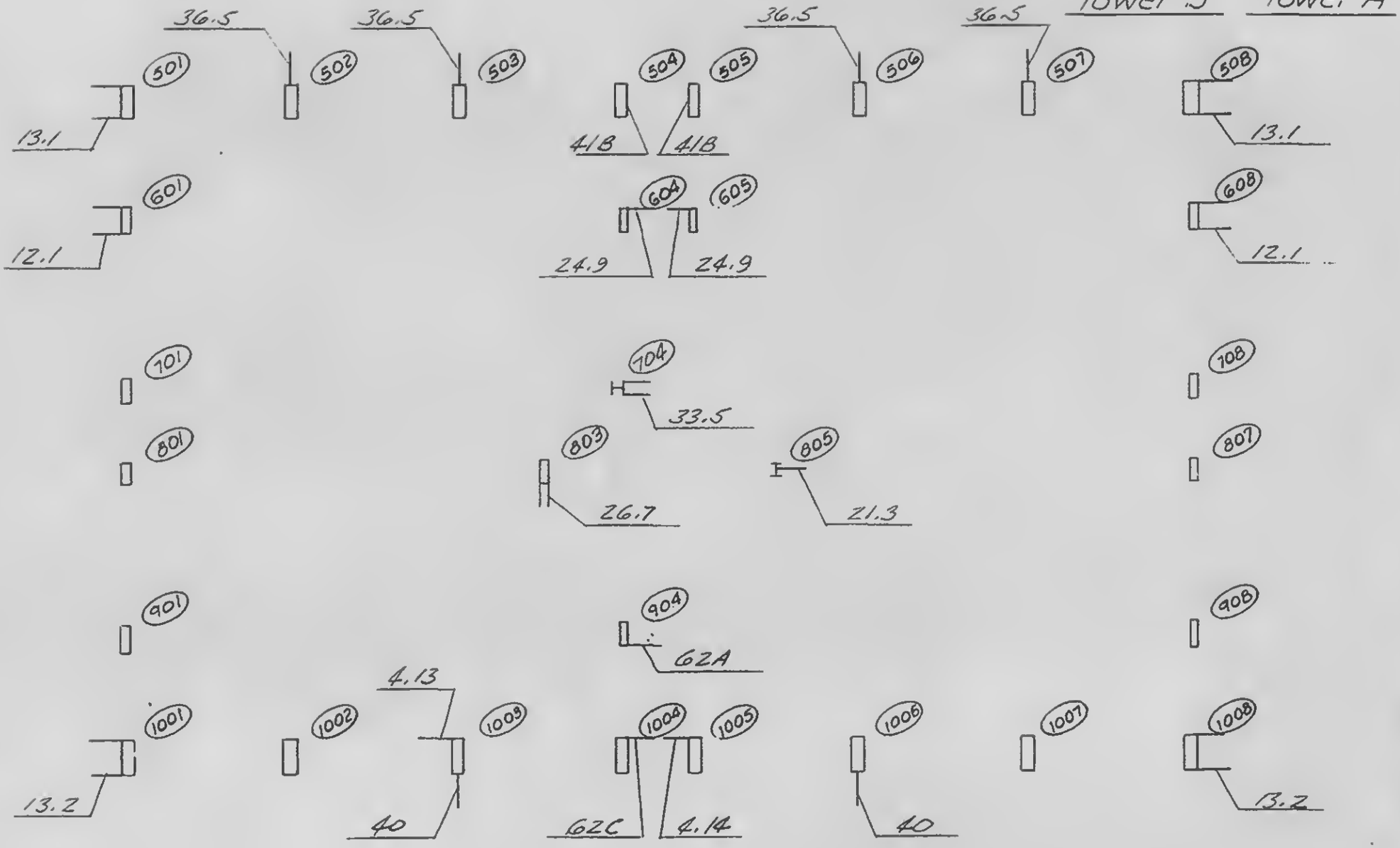
18-AB1-37

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 70-71 | DATE 4-30-69

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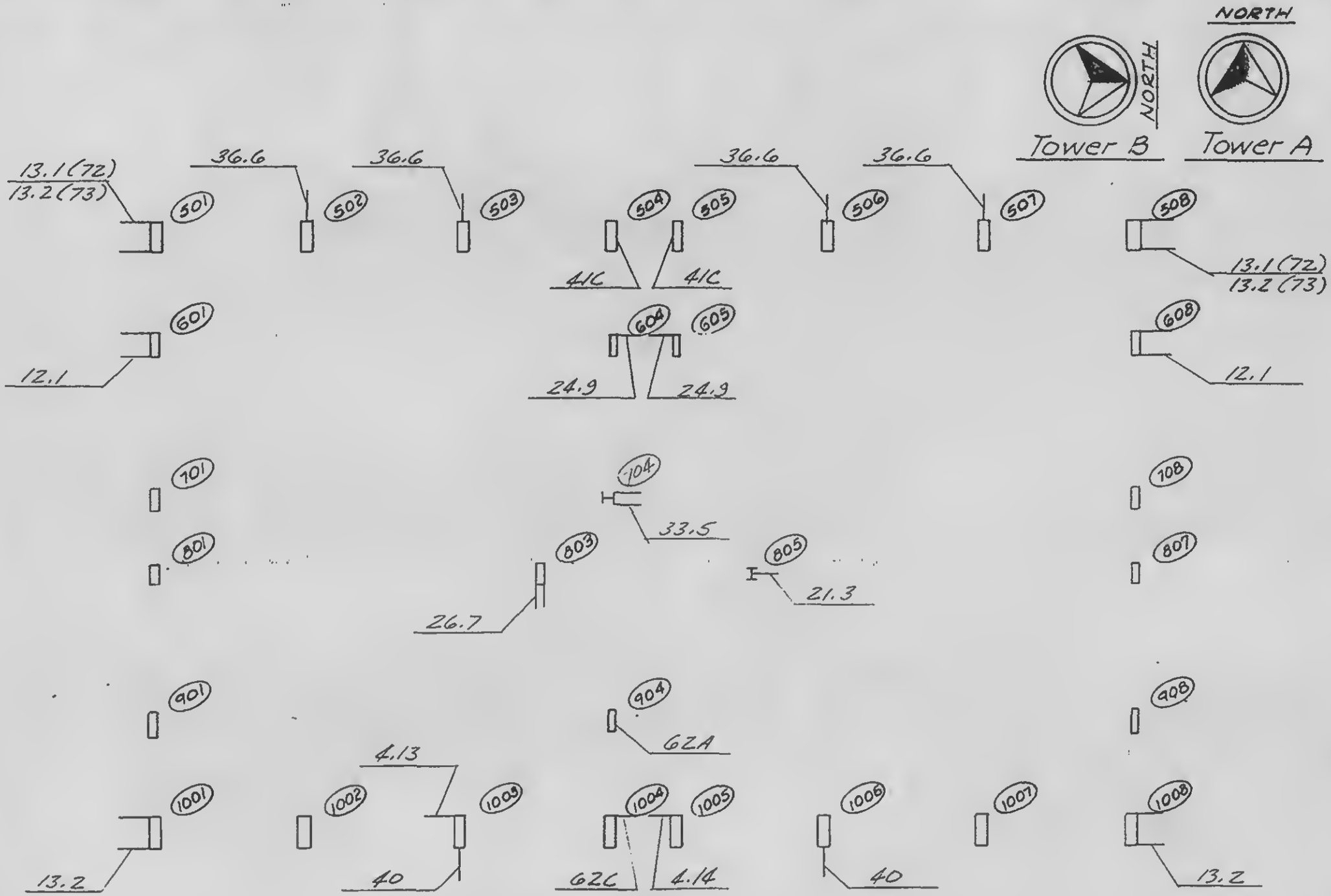
REVIEWED W. Brewer

8-AB1-39

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: KEY PLAN FOR ANCHOR STRARS-FL 72-73 | DATE: 4-30-69

REVISIONS



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LESLIE E. ROBERTSON
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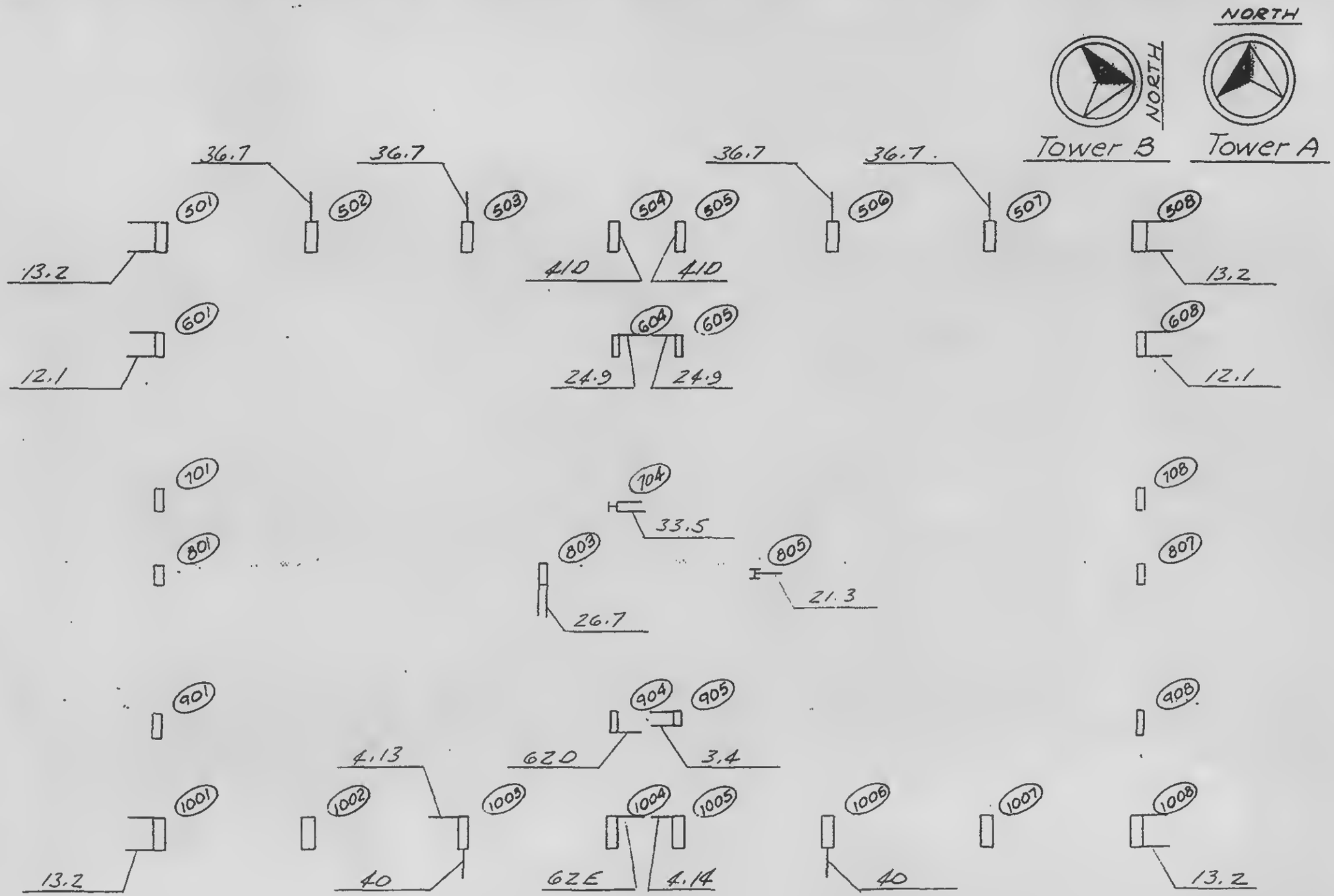
REVIEWED J. Brewer

18-AB1-40

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: KEY PLAN FOR ANCHOR STRAPS - FL 74 | DATE: 4-30-69

REVISIONS



LESLIE E. ROBERTSON — LICENSED PROFESSIONAL ENGINEER — No. 34360 — CITY OF THE STATE OF NEW YORK

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DRAWN: J. Adams

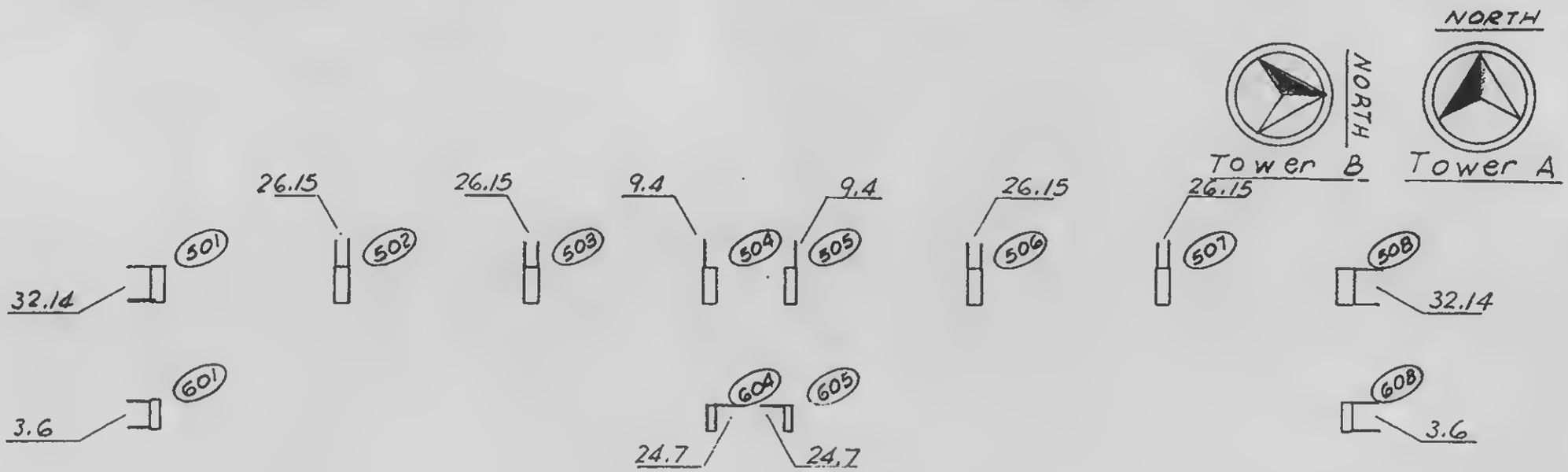
REVIEWED: W. Brewer

S-AB:-4;

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 75 | DATE 5-28-69

REVISIONS



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EDWARD J. ROBERTS
No. 34360
OF THE STATE OF NEW YORK

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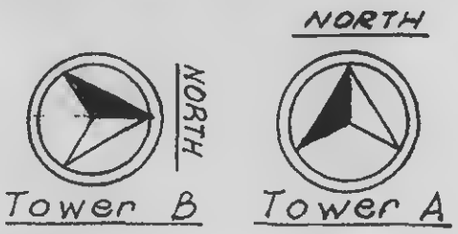
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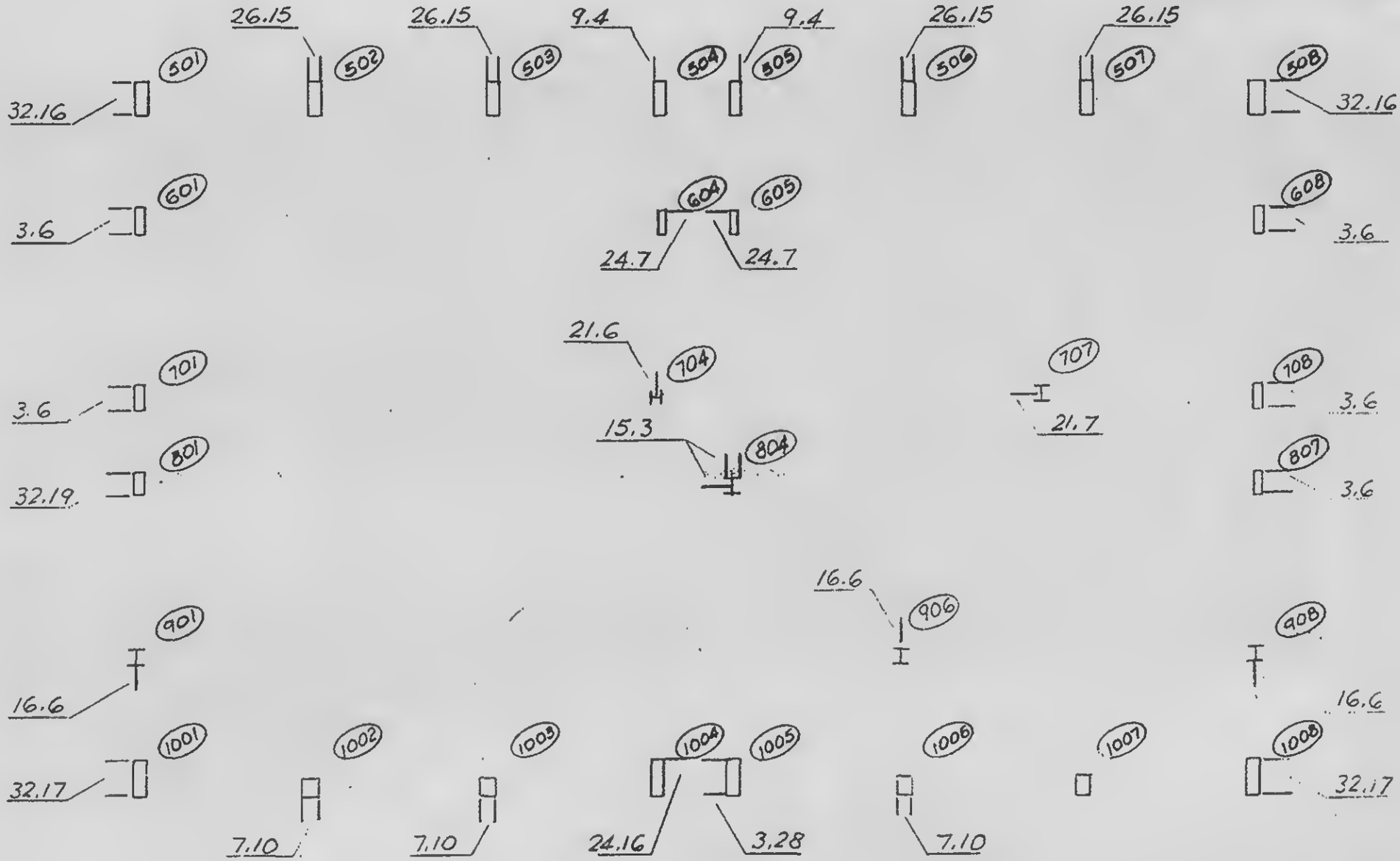
1E-AB1-42

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 77 | DATE 5-28-69

REVISIONS





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16-43:-43

SKILLING HELLE CHRISTIANSEN ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 78 | DATE 4-30-69

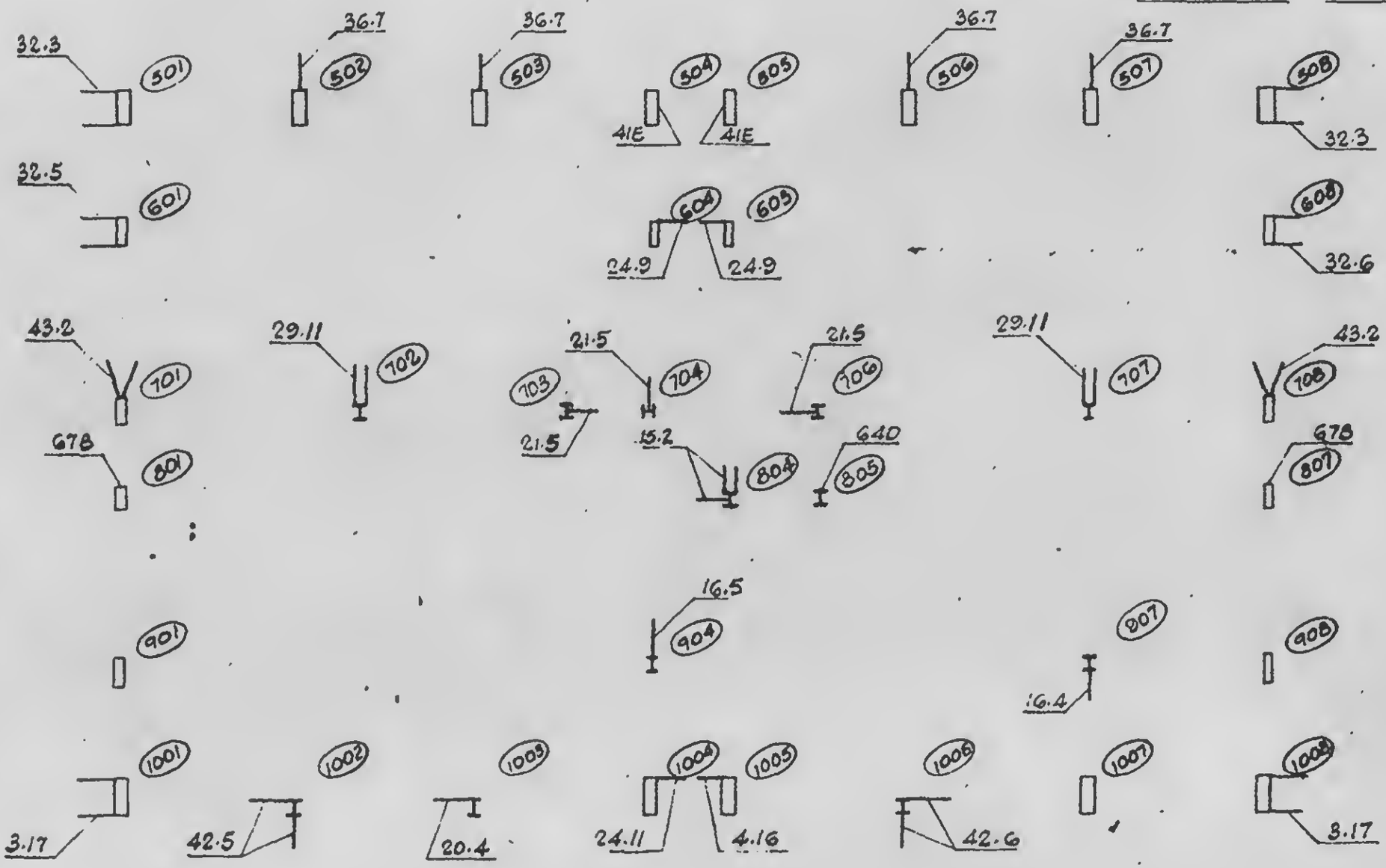
ISIONS

NORTH

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Tower B

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No. 34960
CITY OF THE STATE OF NEW YORK

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E.T.M.

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18-481-44

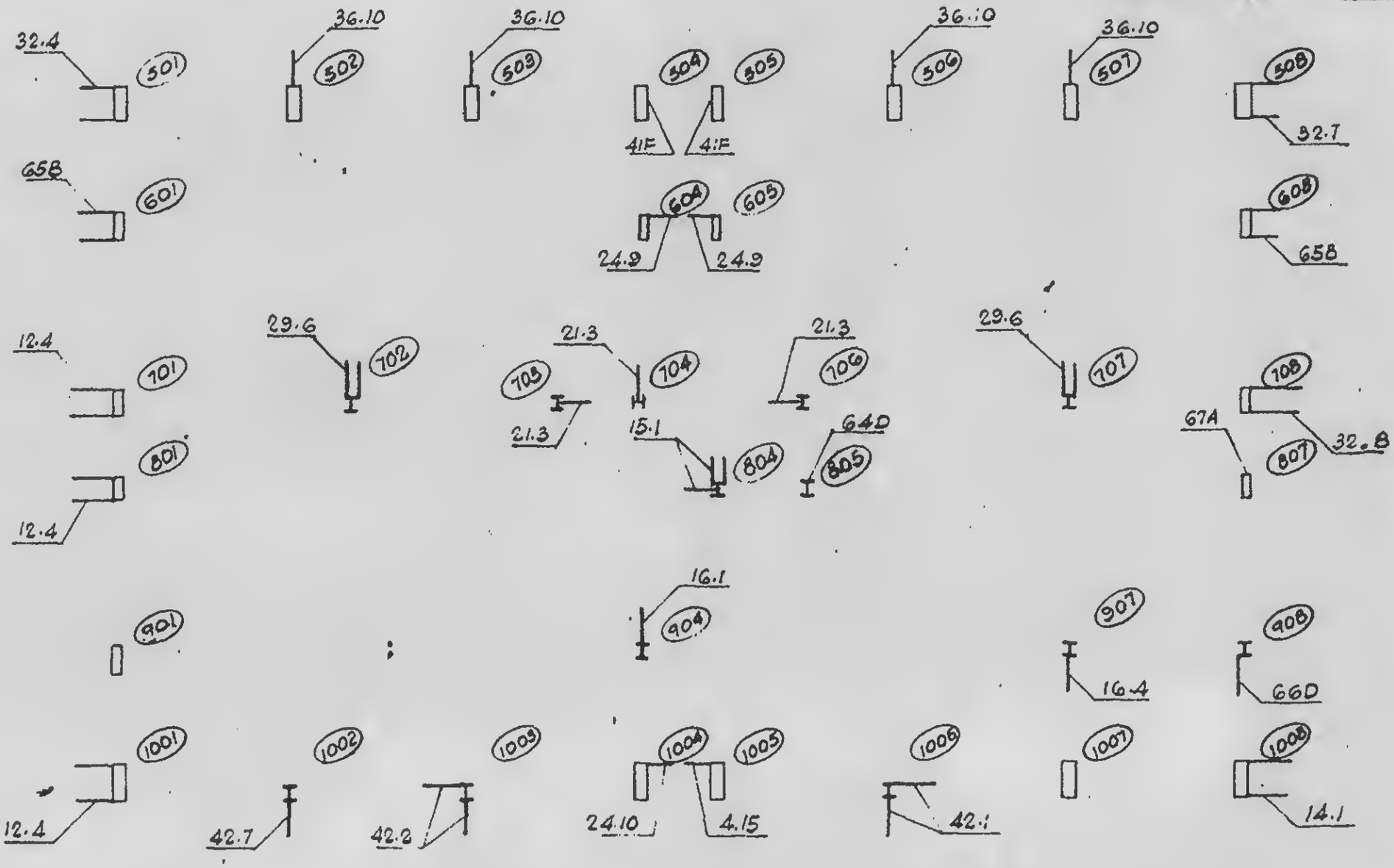
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 79 | DATE 4-30-69

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REVIEWED W. Brewer

18-AB1-45

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PROJECT THE WORLD TRADE CENTER

TITLE STRAP ANCHORS - KEY PLANS - FLOOR 80

DATE 4-30-69

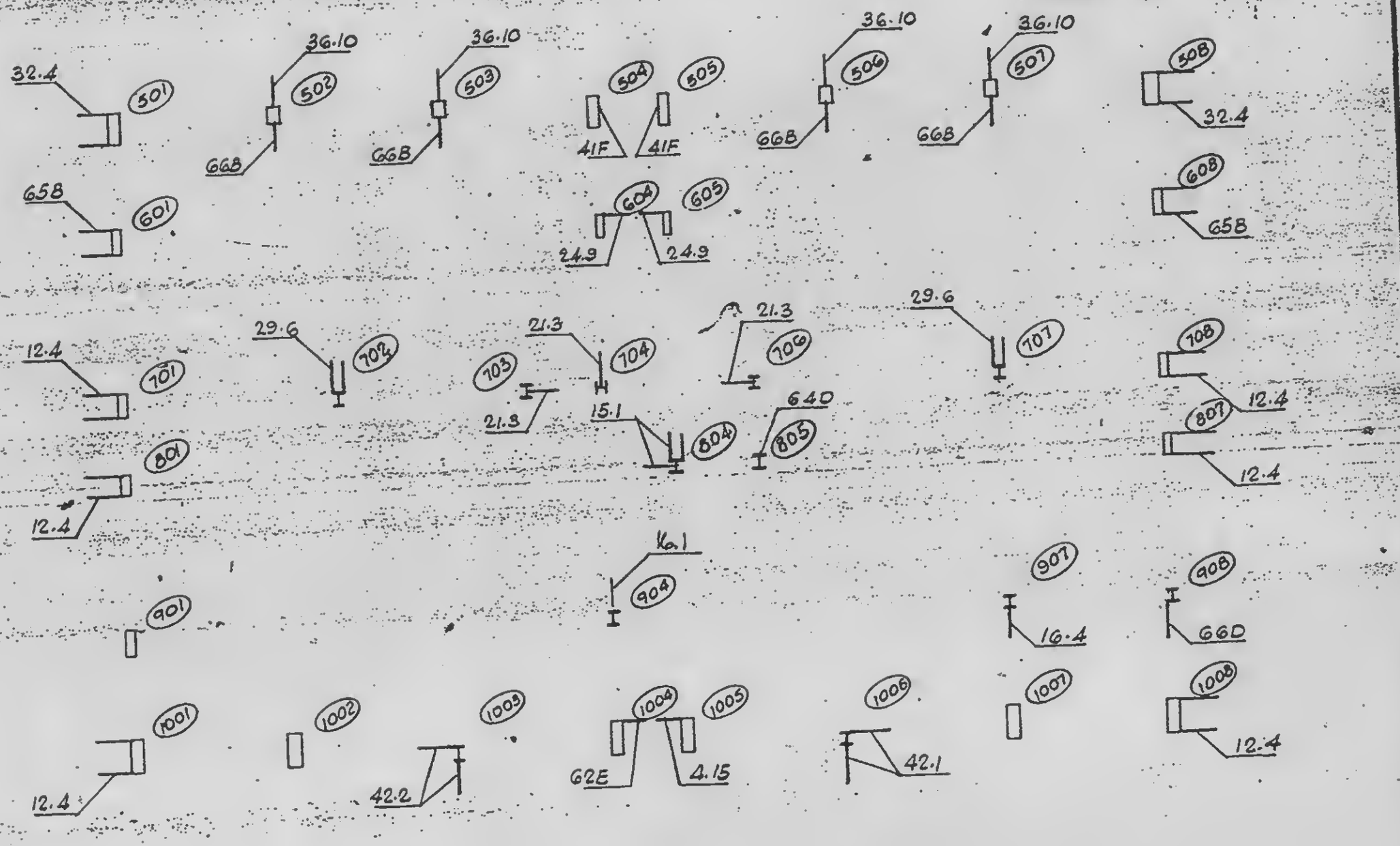
REVISIONS

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18-481-46

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PROJECT	TITLE	DATE
THE WORLD TRADE CENTER	STRAP ANCHORS - KEY PLANS - FLOOR 81	4-30-69

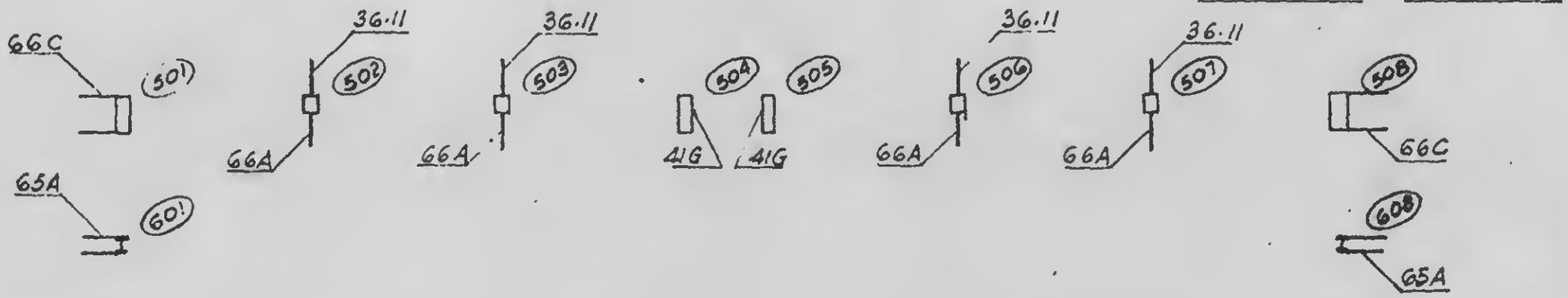
EVISIONS

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No. 34360
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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - KEY PLANS - FLOOR 82 | DATE 4-30-69

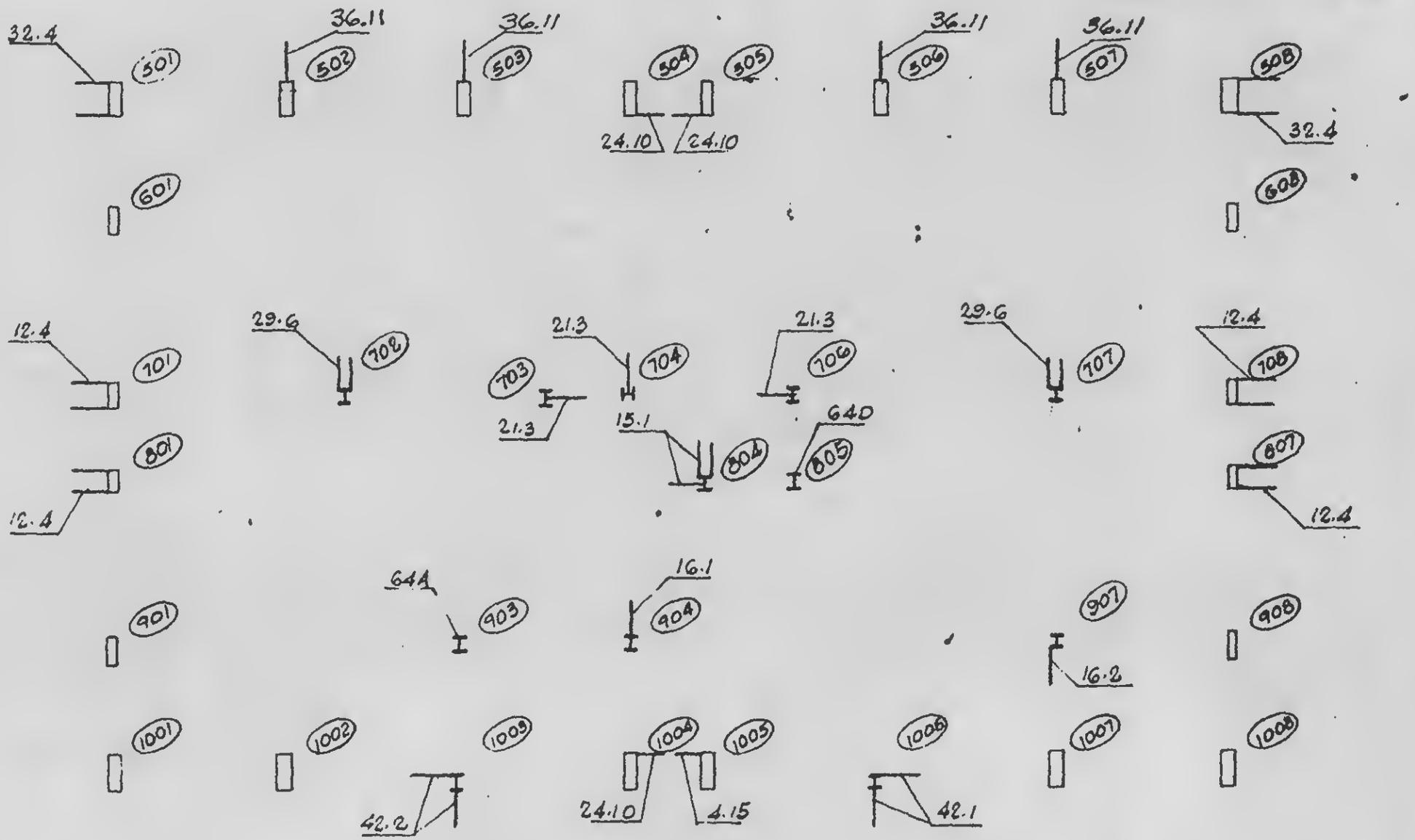
REVISIONS

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Tower B

Tower A



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LESLIE E. ROBERTSON
No 34360
CITY OF THE STATE OF NEW YORK

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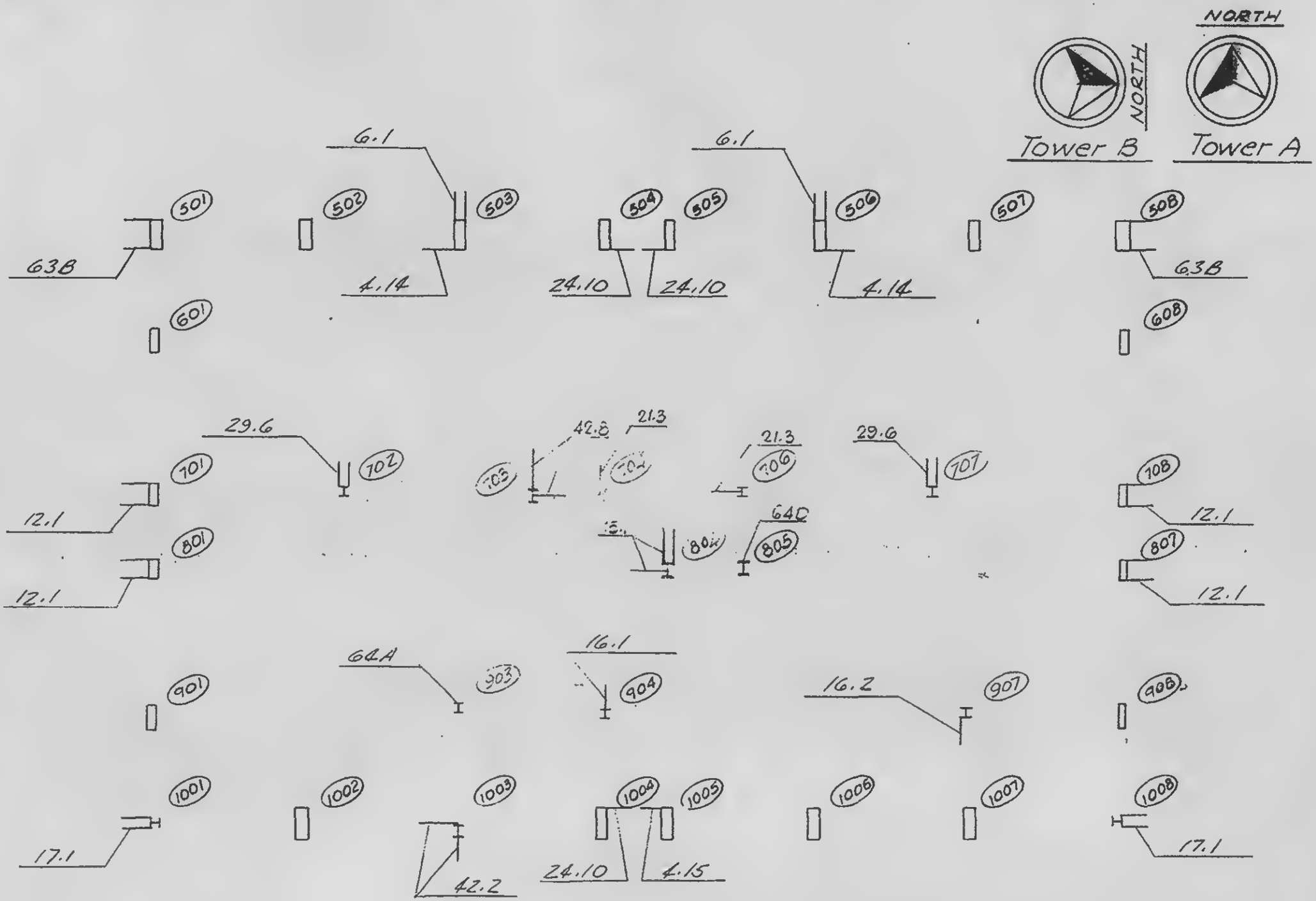
REVIEWED

18-481-48

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: KEY PLAN FOR ANCHOR STRAPS-FL 83 | DATE: 4-30-69

REVISIONS



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DRAWN: J. Adams
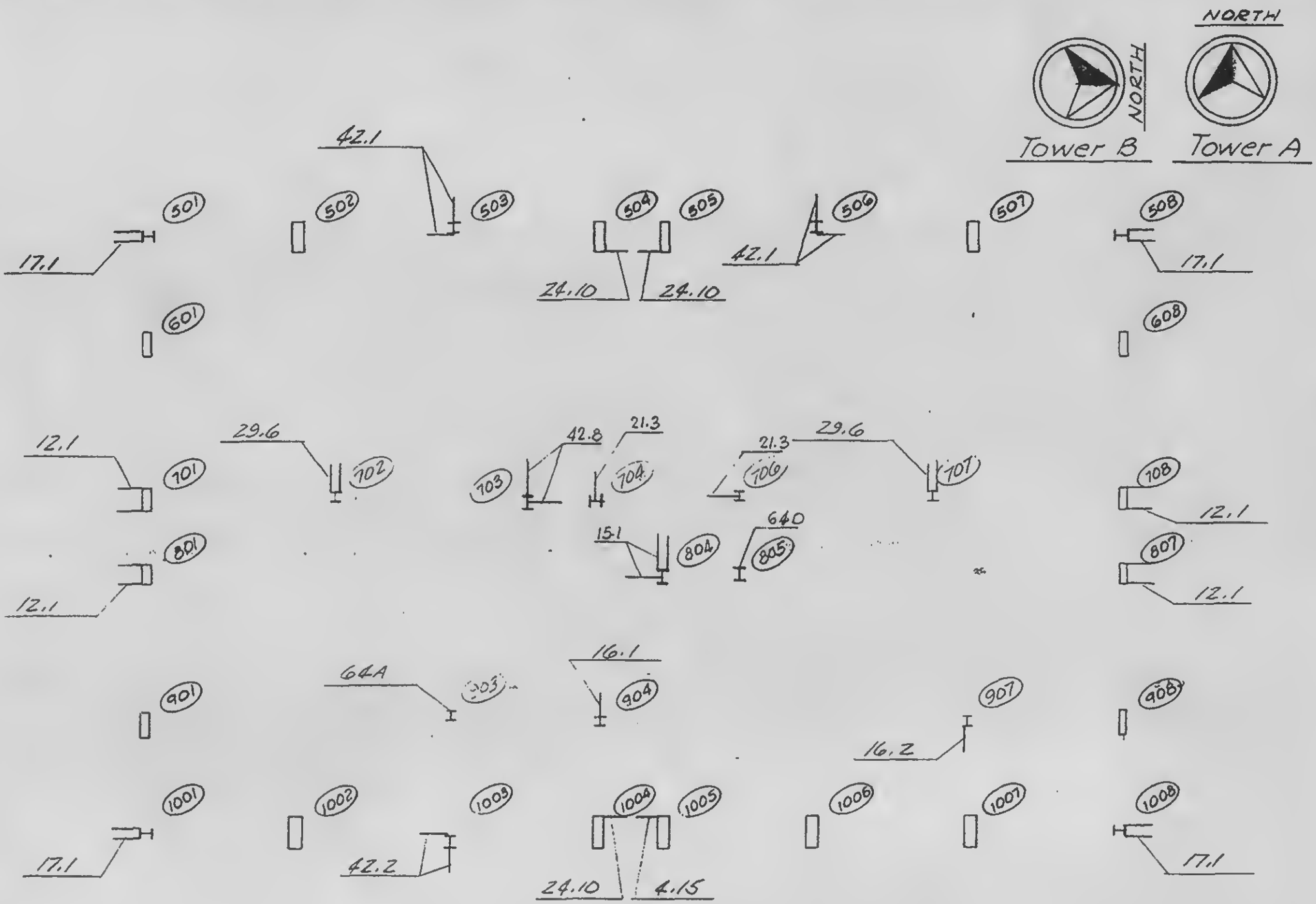
REVIEWED: J. Newman

18-481-49

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 84-86 | DATE 4-30-69

REVISIONS



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LESLIE E. ROBERTSON
NO. 34360
CITY OF THE STATE OF NEW YORK

DRAWN J. Adams

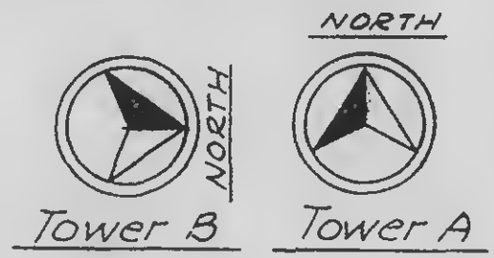
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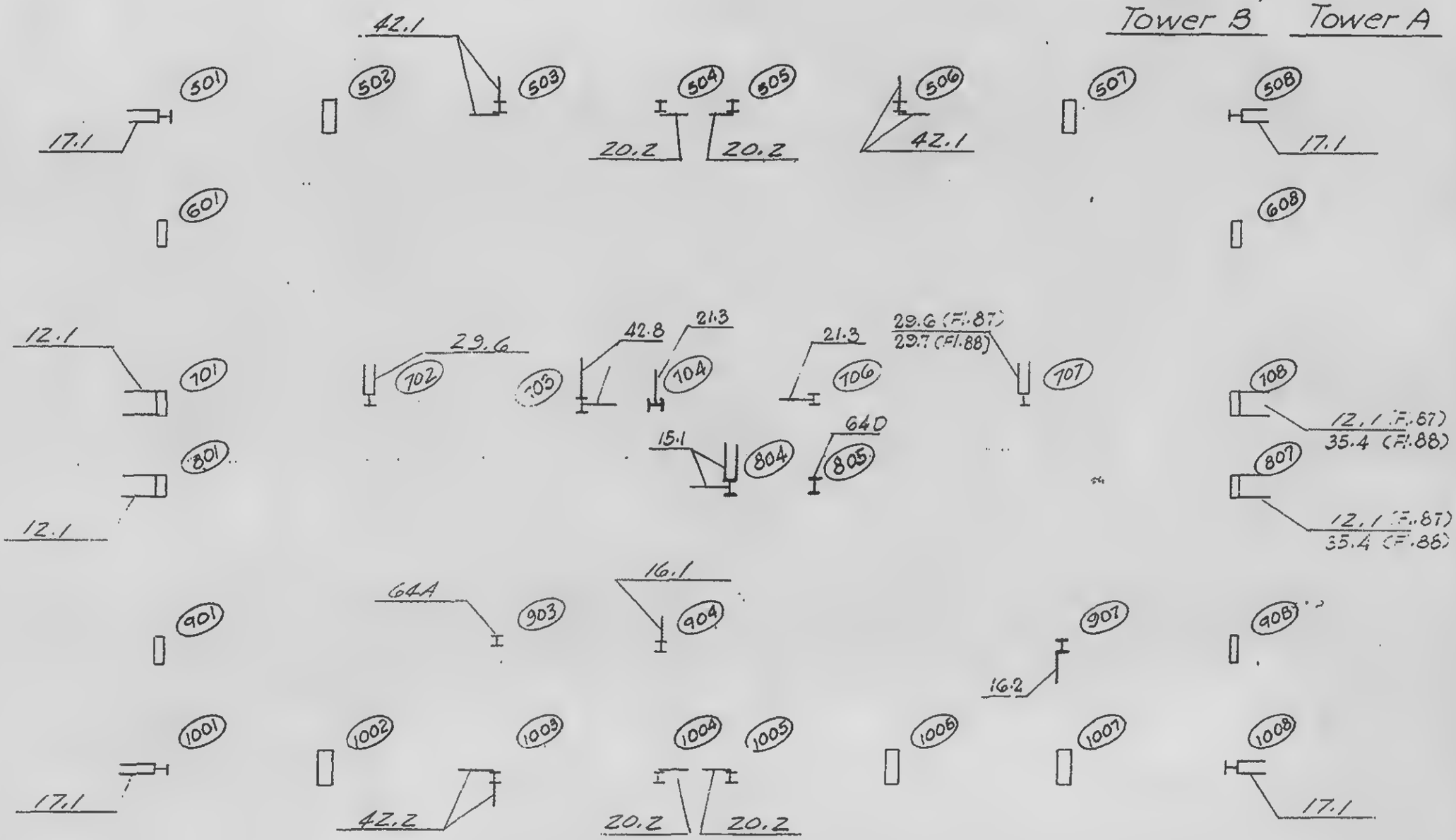
18-AB1-50

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS- FL 87-88 | DATE 4-30-69

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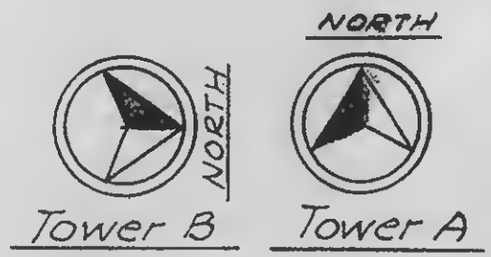
DRAWN Adams
REVIEWED J. Brewer

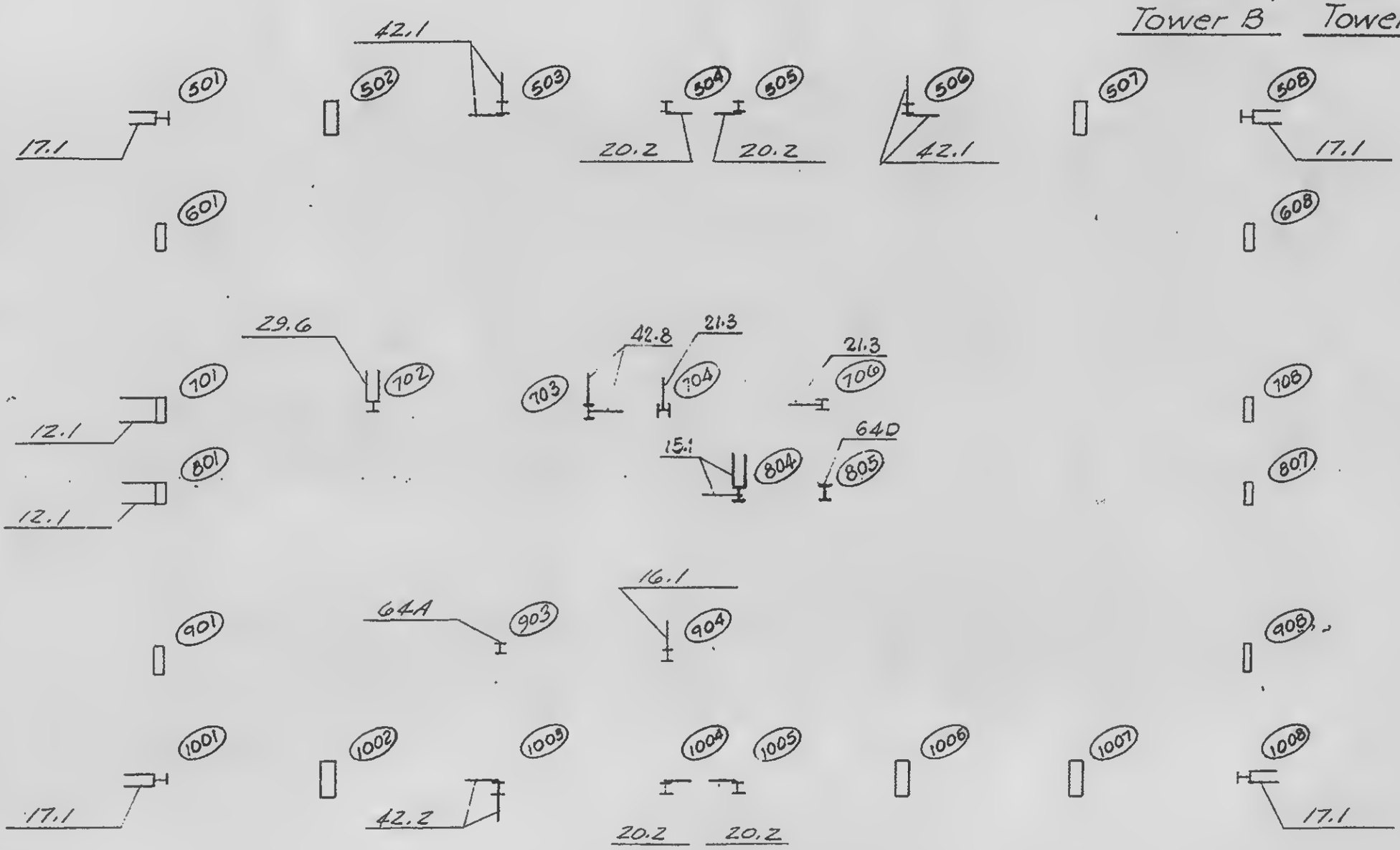
18-A81-51

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PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS - FL 89-92 | DATE 4-30-69

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CITY OF THE STATE OF NEW YORK

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18-AB1-52

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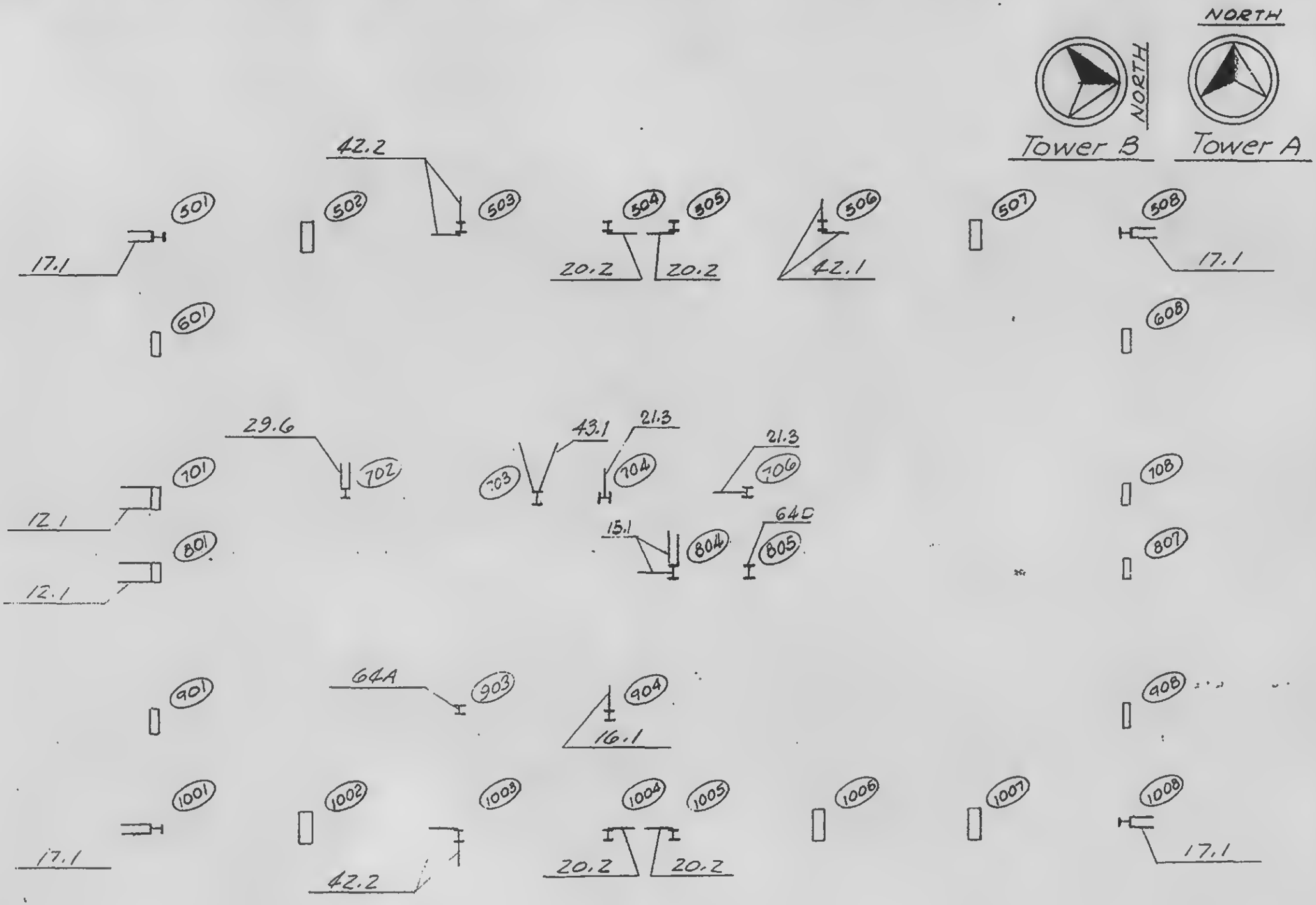
DRAWN J. Adams

REVIEWED J. Brewer

18-AB1-53

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 94 | DATE 4-30-69



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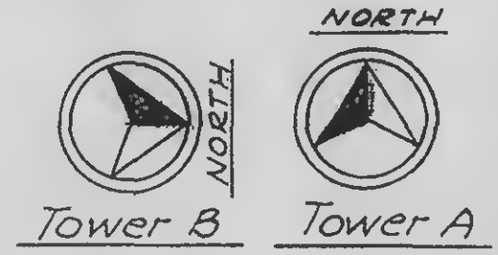
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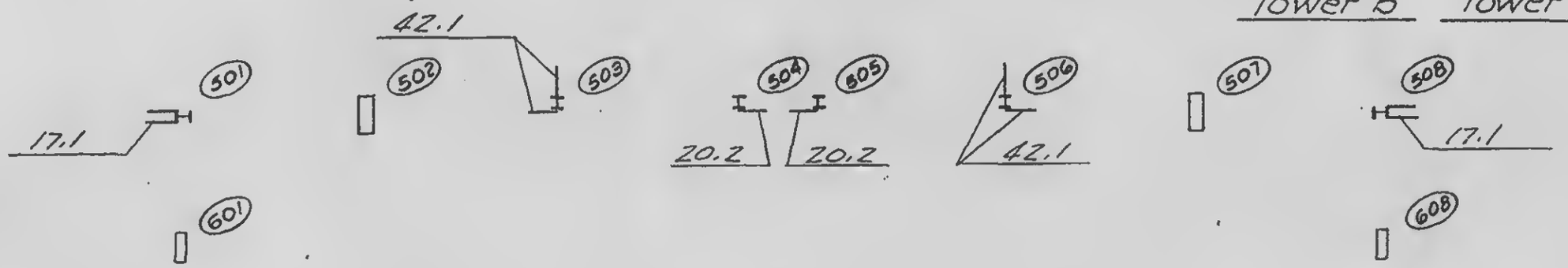
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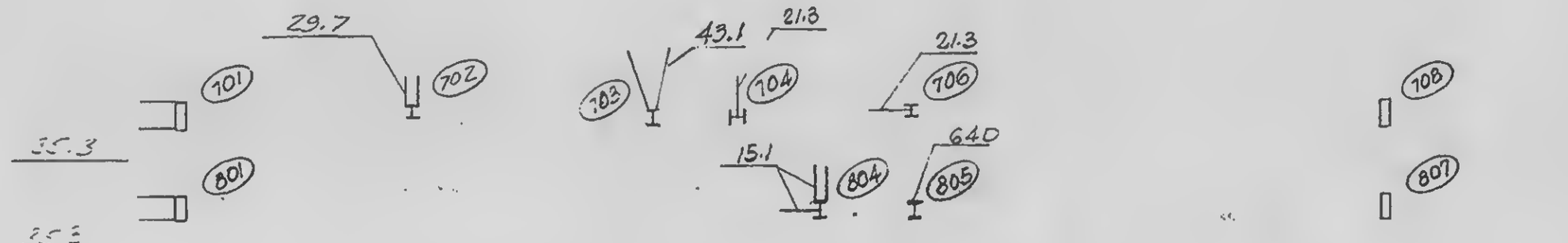
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

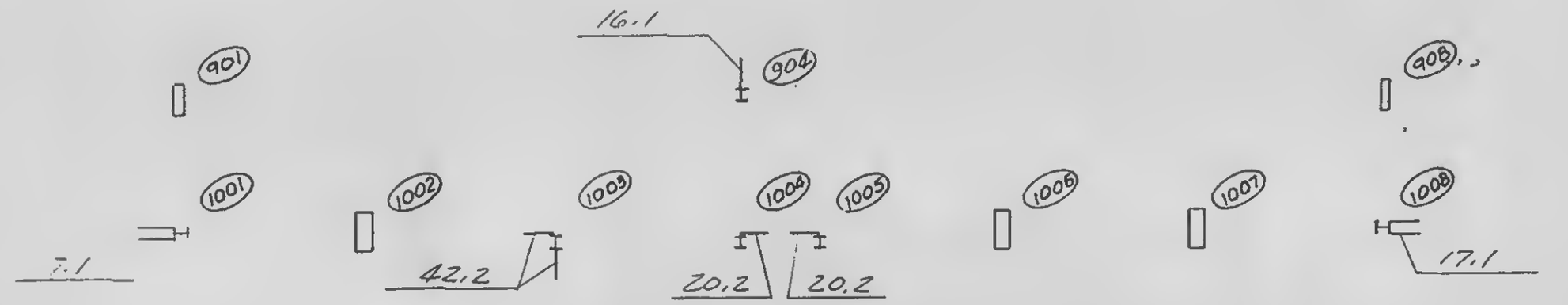
PROJECT: THE WORLD TRADE CENTER | TITLE: KEY PLAN FOR ANCHOR STRAPS - FL. 95 | DATE: 4-30-69

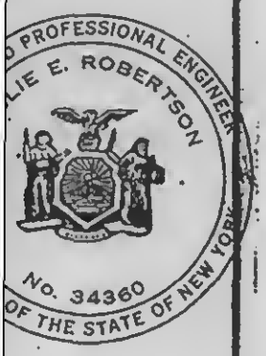
REVISIONS











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DRAWN: J. Adams

REVIEWED: D. Brewer

18-481-55

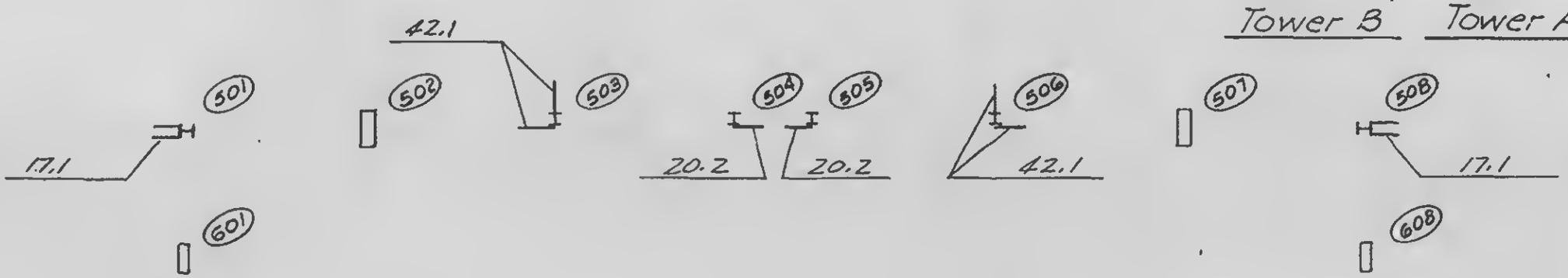
SKIDMORE, OWINGS & MERRILL CHRISTIANSEN ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS - FL 96-100 | DATE 4-30-69

REVISIONS

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LIE E. ROBERTSON — PROFESSIONAL ENGINEER — No. 34360 — OF THE STATE OF NEW YORK

ID

DRAWN J. Adams

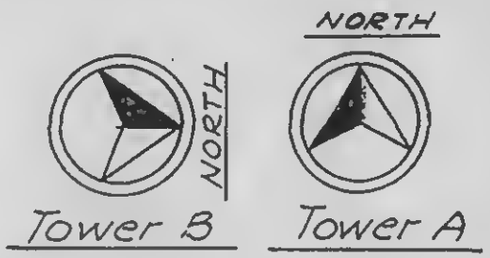
REVIEWED W. E Brewer

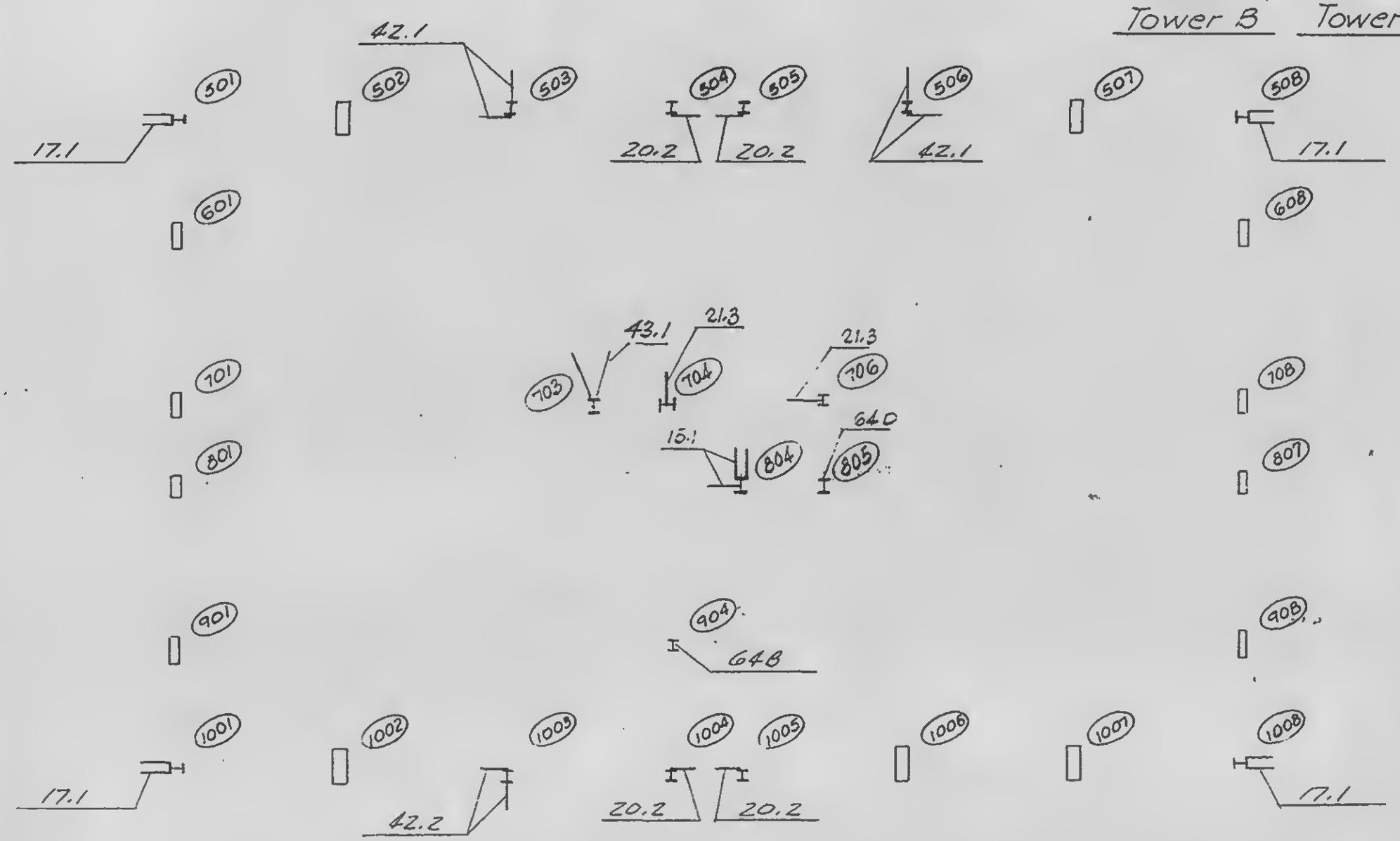
18-A8.-56

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: KEY PLAN FOR ANCHOR STRAPS- FL 101 | DATE: 4-30-69

REVISIONS





PROFESSIONAL ENGINEER
JAMES E. ROBERTSON
No. 34360
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CHECKED

DRAWN
J. Adams

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13-AB'-57

PROJECT: THE WORLD TRADE CENTER | TITLE: KEY PLAN FOR ANCHOR STRAPS-FL 102-104 | DATE: 4-30-69

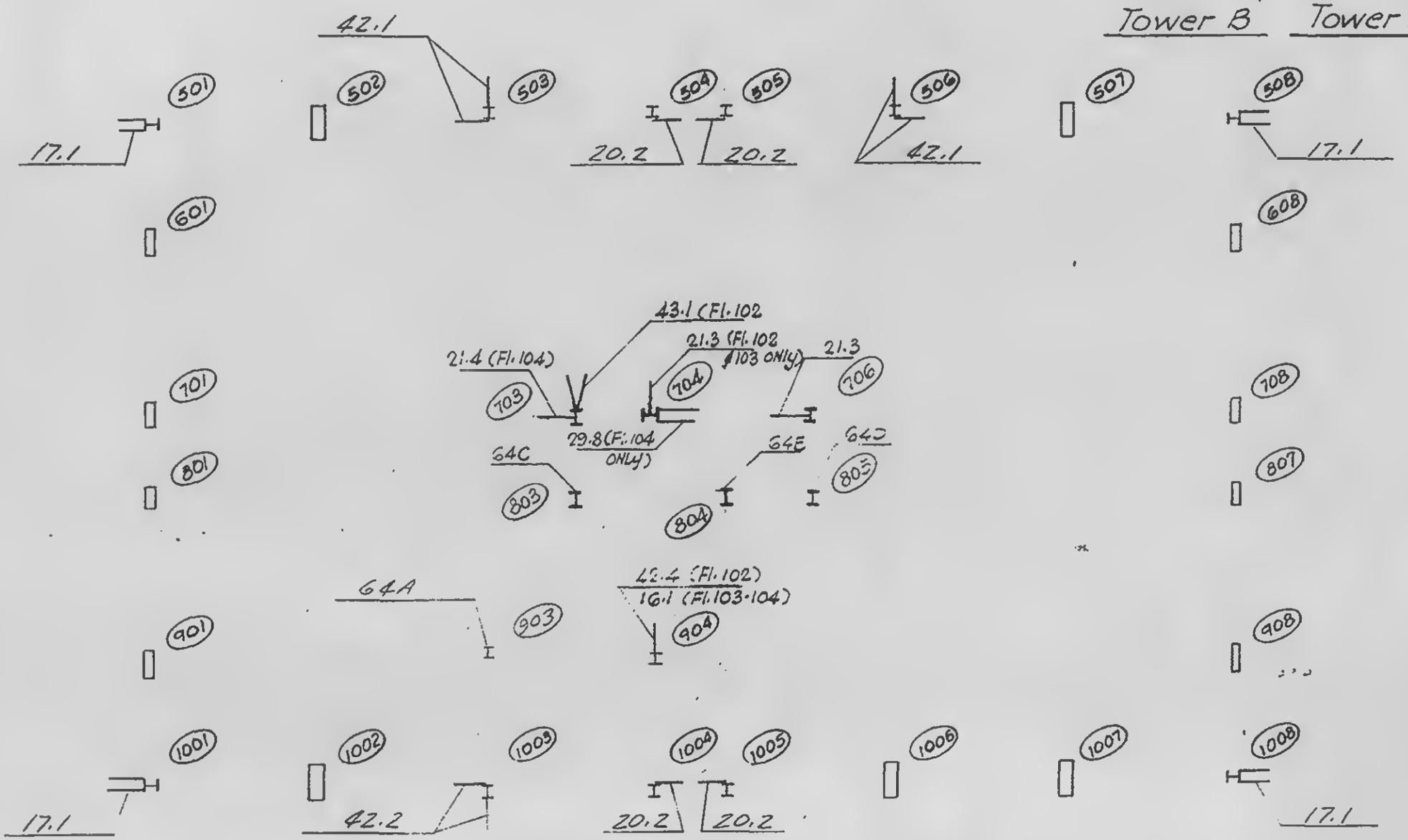
REVISIONS

NORTH

NORTH

Tower B

Tower A



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E. ROBERTSON
34360
OF THE STATE OF NEW YORK

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PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS- FL 105 | DATE 7-14-69

REVISIONS

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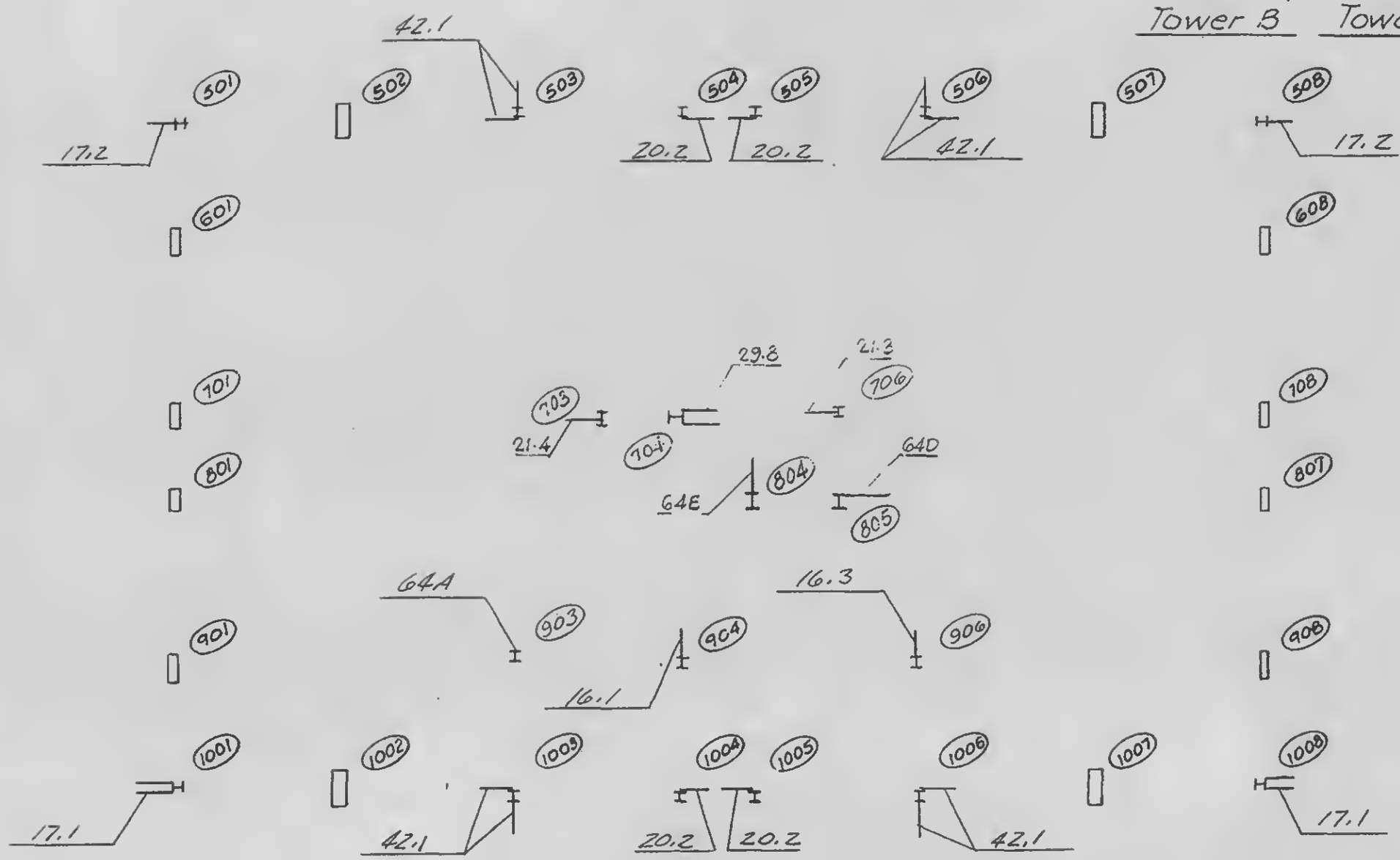


Tower B

NORTH



Tower A



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18-A81-59

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PROJECT THE WORLD TRADE CENTER | TITLE KEY PLAN FOR ANCHOR STRAPS-FL 106 | DATE 7-14-69

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18-AB1-60

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT	TITLE	DATE
THE WORLD TRADE CENTER	ANCHOR STRAPS - CORE DETAILS - INDEX	10/ 1/69

REVISIONS

10/16/68
10/30/68
2/7/69
4/30/69
5/20/69
5/28/69

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PROJECT	TITLE	DATE
THE WORLD TRADE CENTER	STRAP ANCHOR GENERAL NOTES	10/16/68

REVISIONS

2-7-69

1. Streps and back up material to be ASTM A36.
2. All welding to be with E70xx low hydrogen electrodes.
3. Back up material for complete penetretion welding not to exceed 1" x ¼".
4. Stud lengths *see table A*
5. Streps rest on steel framing members unless noted (±), measured from reference floor line to top of strap.
6. Strap notation $\frac{\text{strap}}{6\times1/2\times 2\text{-}7\,1/2}, \frac{\text{studs}}{3\times 5/3/4}, \frac{\text{strep elevation}}{(-6\,1/2)} =$

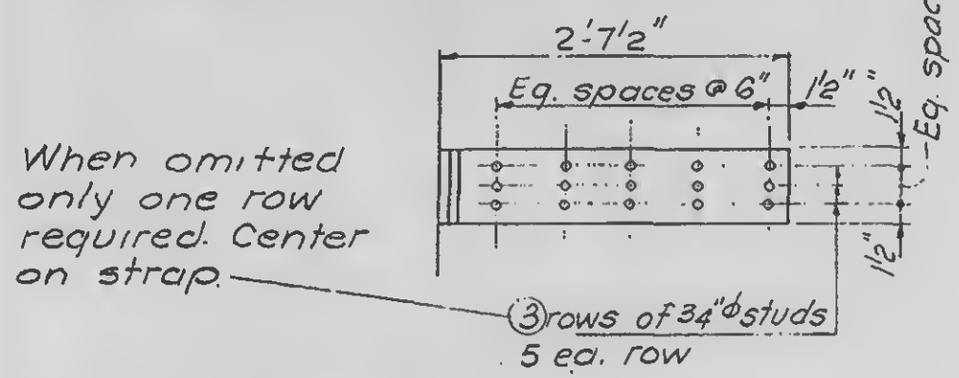
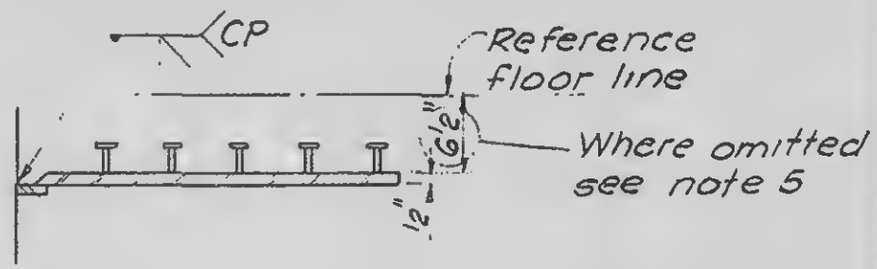


Table A		
Stud Size	Stud length	Shop Dwg Stud Designation
1/2	2	R 420
5/8	2 1/2	R 524
3/4	3	R 630
7/8	3 1/2	R 734



7. See 18-AB1 for Key Plans.

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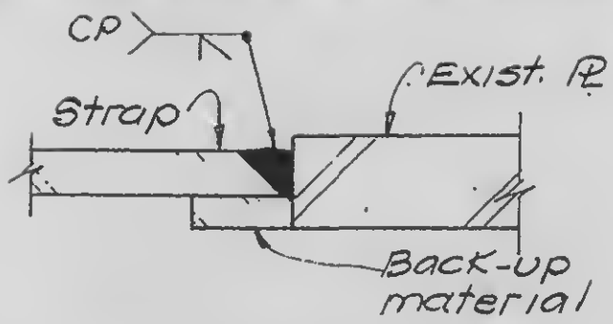
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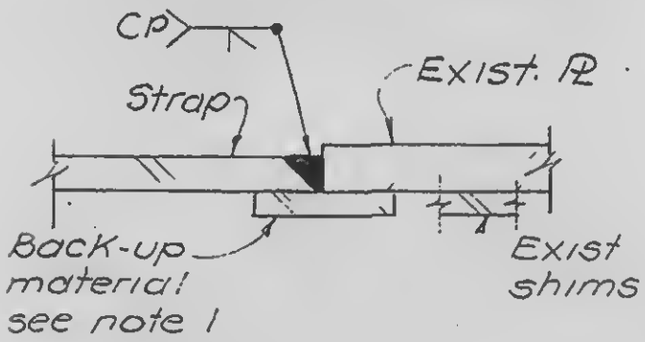
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - TYPICAL DETAILS | DATE 10/30/68

REVISIONS

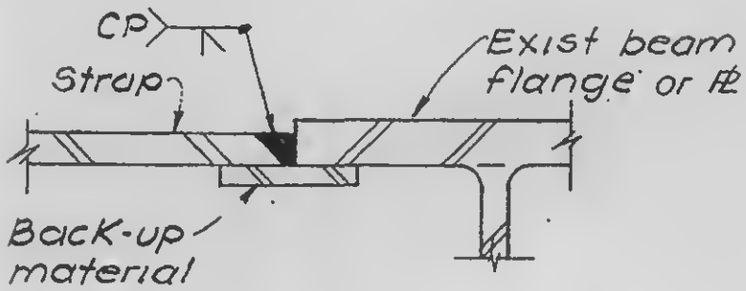
12-13-68
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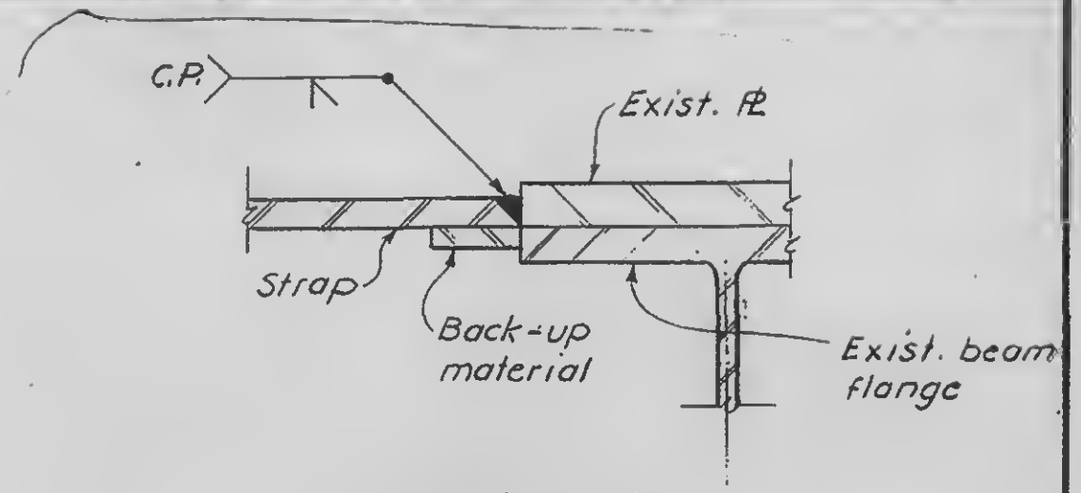
Section a-a



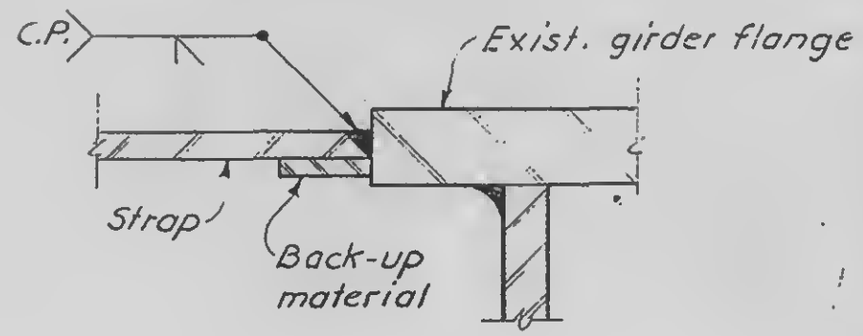
Section b-b



Section c-c



Section d-d



Section e-e

Notes:

1. Back-up material in Section b-b should be shipped loose and field attached to suit existing clearances.

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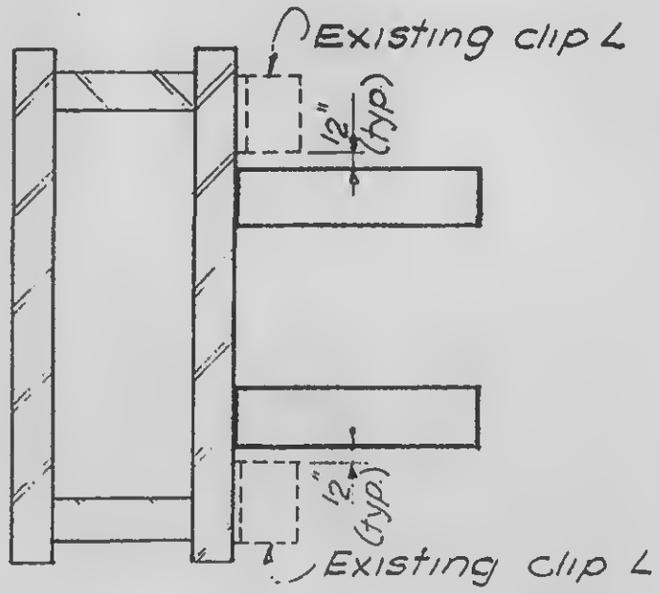
18-AB2-2.2

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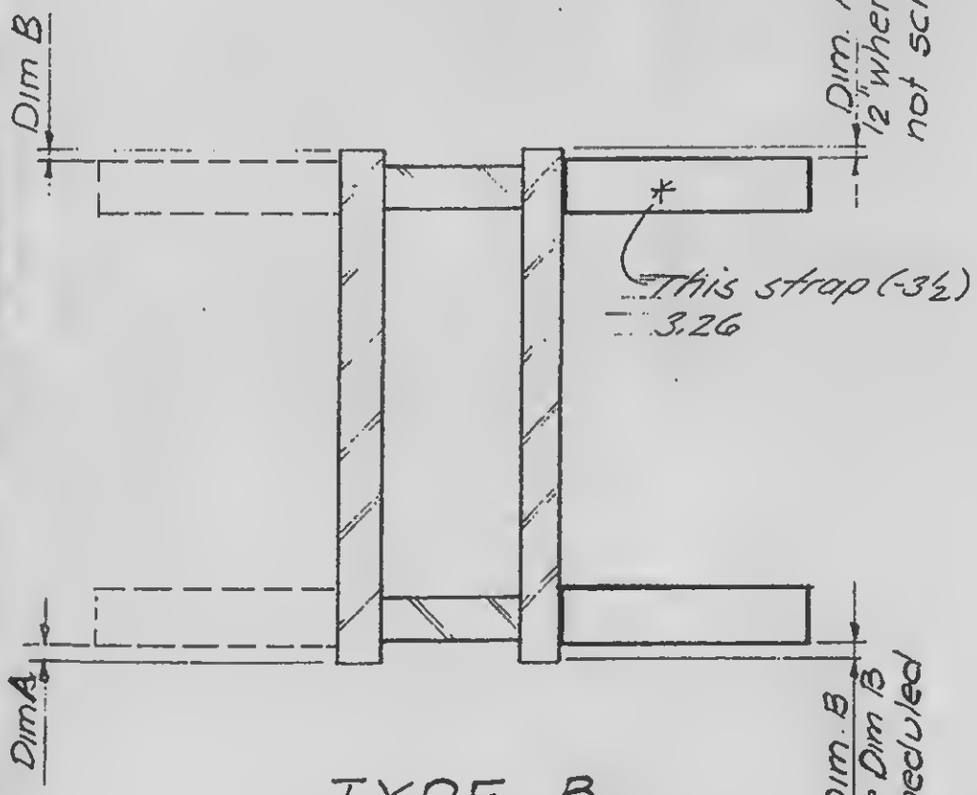
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 3 | DATE 10/16/68

REVISIONS

10-30-68
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4-30-69
5-20-69
5-28-69
10-1-69



TYPE A



TYPE B

See Note 6 - 18-AB2-2

Detail Nº	Strap	Studs	Elev	Dim. A	Dim B	Type
3.1	4"x 1/2"x2-1/2"	4/3/4	(-9 3/4)	—	—	A
3.2	4x 1/2x1-7 1/2	3/3/4	(-9 3/4)	—	—	A
3.3	3x 3/8x1'-7 1/2	3/5/8	(-4)	—	—	B
3.4	3x 3/8x1'-7 1/2	3/5/8	(-4 1/8)	—	—	B
3.5	6x 1/2x2-1/2	4/7/8	(-4)	—	1 1/2"	B
3.6	3x 3/8x1'-7 1/2	3/5/8	—	—	—	A
3.7	4x 3/8x2-1/2	4/5/8	(-3 3/8)	—	—	A
3.8	6x 1/2x2-7 1/2	2x5/5/8	(-3 1/4)	1'-3 1/2"	10	B
3.9	4x 1/2x2-7 1/2	5/5/8	(-3 1/4)	—	—	A
3.10	4x 3/4x4-1/2	8/5/8	(-3)	—	—	A
3.11	6x 3/4x3-7 1/2	2x7/5/8	(-3)	—	—	A
3.12	4x 3/8x2-1/2	4/5/8	—	—	—	A
3.13	4x 3/4x4-1/2	8/5/8	—	—	—	A
3.14	4x 1/2x2-1/2	4/3/4	(-7)	—	—	A
3.15	4x 1/2x1-7 1/2	3/3/4	—	—	—	A
3.16	4x 3/4x2-1/2	4/7/8	—	—	—	A
3.17	4x 1/2x3-6	6/5/8	(-3 1/2)	-	-	B
3.18	8x 1/2x4-6	8/3/4	(-3 1/2)	-	-	B
3.19	4x 1/2x3-6	6/5/8	(-5 3/4)	-	-	A
3.20	4x 1/2x3-6	6/5/8	(-3 1/2)	-	-	A
3.21	4x3/4x3-0	5/3/4	(-3 3/4)	-	-	B
3.22	4x 1/2x2-6	4/3/4	(-4)	-	-	B
3.23	4x 1/2x2-6	4/3/4	(-7 1/2)	-	-	B
3.24	4x3/4x4-1/2	8/5/8	(-3)	-	-	A
3.25	10x 1/2x3-6	2x6/3/4	(-4)	-	-	B
3.26	10x 1/2x3-6	2x6/3/4	(-4)/(-3 1/2)*	-	-	B
3.27	4x 1/2x3-6	2x6/5/8	(-3 1/4)	-	-	A
3.28	3x 3/8x1'-7 1/2"	3/5/8	(-7 5/8)	-	-	B
3.29	5x 3/4x 3'-6"	6/7/8	(-5 1/4)	—	—	B
3.30	4x 1/2x 3'-6"	6/5/8	(-5 1/2)	—	2"	B
3.31	8x 1/2x 3'-0"	2x5/3/4	(-3 1/2)	—	—	B

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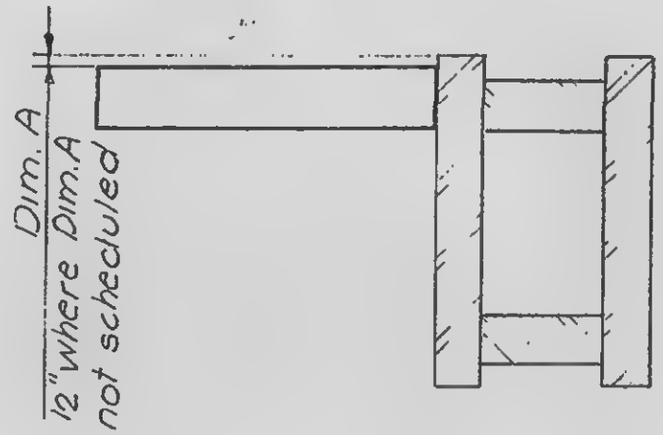
18-AB2-3

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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 4 | DATE: 10/30/68

REVISIONS

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10-1-69



See Note 6 - 18-AB2-2

Detail Nº	Strap	Studs	Elev	Dim. A
4.1	4"x1/2"x2'-1 1/2"	4/3/4	—	—
4.2	3x3/8x1-7 1/2	3/5/8	(-4 1/8)	—
4.3	5x3/4x5-1 1/2	10/5/8	(-3)	10"
4.4	4x1/2x3-5	7/5/8	(-5 3/4)	2
4.5	3x3/8x1-7 1/2	3/5/8	(-6 1/8)	—
4.6	3x1/2x2-1 1/2	4/3/4	(-6 1/2)	—
4.7	3x3/8x1-7 1/2	3/5/8	(-3 5/8)	—
4.8	3x1/2x2-7 1/2	5/5/8	(-4)	—
4.9	4x1/2x1-7 1/2	3/3/4	(-7 1/2)	—
4.10	3x3/4x2-1 1/2	4/3/4	(-7 1/4)	—
4.11	3x3/8x1-7 1/2	3/5/8	(-4)	5
4.12	3x3/8x1-7 1/2	3/5/8	(-7 5/8)	—
4.13	6x1/2x3'-1 1/2"	6/3/4	(-4)	—
4.14	4x1/2x2'-1 1/2"	4/3/4	(-3 1/2)	—
4.15	3x3/8x2'-1 1/2"	4/5/8	(-4 1/8)	—
4.16	3x3/8x2'-1 1/2"	4/5/8	(-6 5/8)	—
4.17	4x1/2x2-6	4/3/4	(-5 1/2)	—
4.18	4x1/2x3'-5"	7/5/8 *	(-5 3/4)	1"
4.19	6x1/2x5'-0"	2x5/5/8	(-3)	1"

* @5 1/2"

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DRAWN: S. Wexler
REVIEWED: W. Brewer

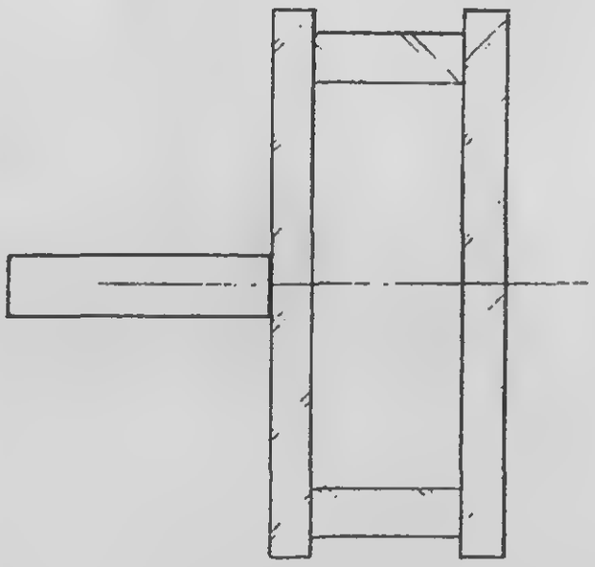
18-AB2-4

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 5 | DATE 10/30/68

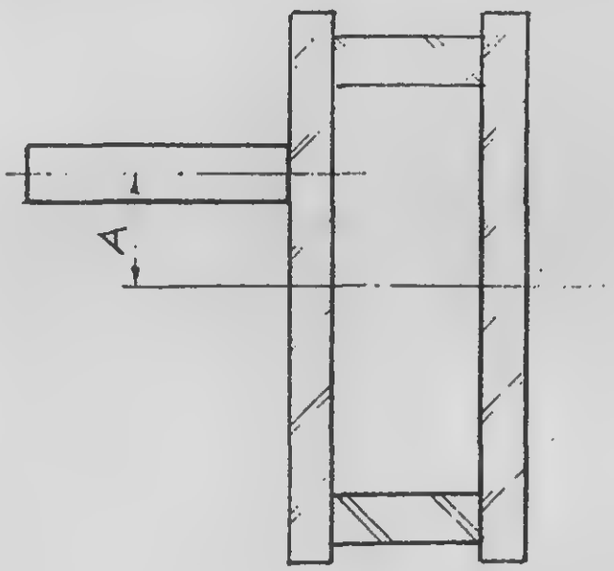
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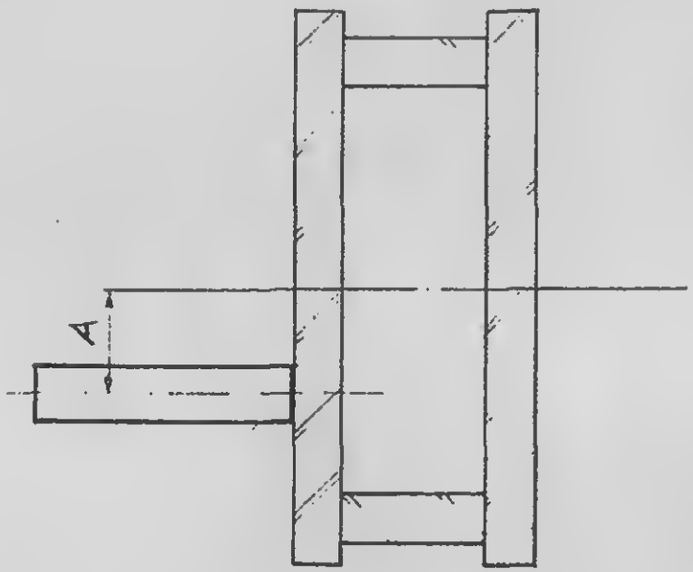


TYPE A

See Note 6 — 18-AB2-2					
Detail N.°	Strap	Studs	Elev	Type	Dimen "A"
5.1	21x1/2x1-1/2	4x2/3/4	—	A	—
5.2	27x3/4x2-1/2	5x4/5/8	(-3)	A	—
5.3	4x3/8x2-1/2	4/5/8	(-4 1/8)	A	—
5.4	10x1/2x3-1/2	2x6/3/4	(-4)	A	—
5.5	3x3/8x1-6	3/5/8	(-4 1/8)	A	—
5.6	21x3/4x3-7 1/2	4x7/5/8	(-3)	C	1"
5.7	21x3/4x3-7 1/2	4x7/5/8	(-3)	B	1"
5.8	4x1/2x2'-0"	3/3/4	(-7 1/2)	A	-



TYPE B



TYPE C

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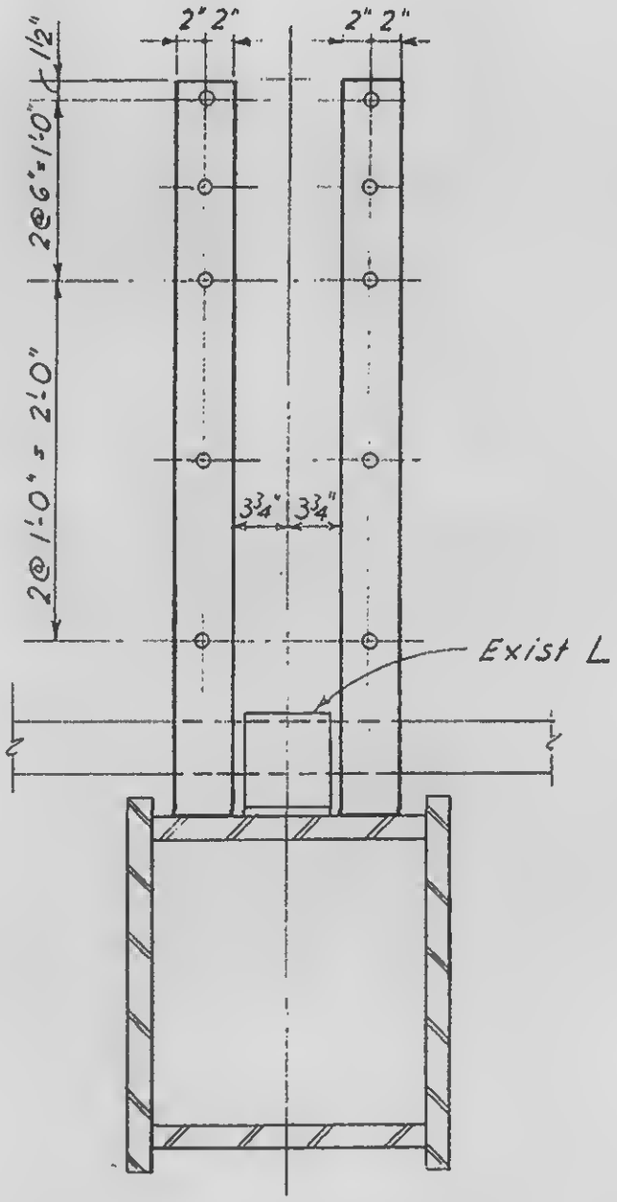
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18-AB2-5

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 6 | DATE 4/30/69

REVISIONS



Detail No.	Strap	Studs	
6.1	4"x½"x 4'-1"	⅝"ϕ	(-3½)

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DESIGNED

DRAWN F. Smith

REVIEWED W. Brewer

18-AB2-6

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 7 | DATE 10/30/68

REVISIONS

12-13-68
5-20-69
5-28-69
10-1-69



See Note 6-18-AB2-2

Detail N°	Strap	Studs	Elev
7.1	5"x1'2"x3'-7½	7/5⅝	(-3¼)
7.2	3x⅜x1-7½	3/¾	—
7.3	3x½x2-1½	4/5⅝	—
7.4	5x⅝x4-1½	8/5⅝	(-3⅛)
7.5	4½x¾x4-7½	9/5⅝	(-3)
7.6	4x⅝x3-7½	7/5⅝	(-3⅛)
7.7	5x¾x5-1½	10/5⅝	(-3)
7.8	3x⅜x1-6½	3/5⅝	—
7.9	4x¾x3-0	5/¾	(-7½)
7.10	3x½x1'-7½"	3/¾	—
7.11	5x¾x4'-0"	7/⅞	—
7.12	6x⅝x4'-0"	2x7/5⅝	(-3⅜)

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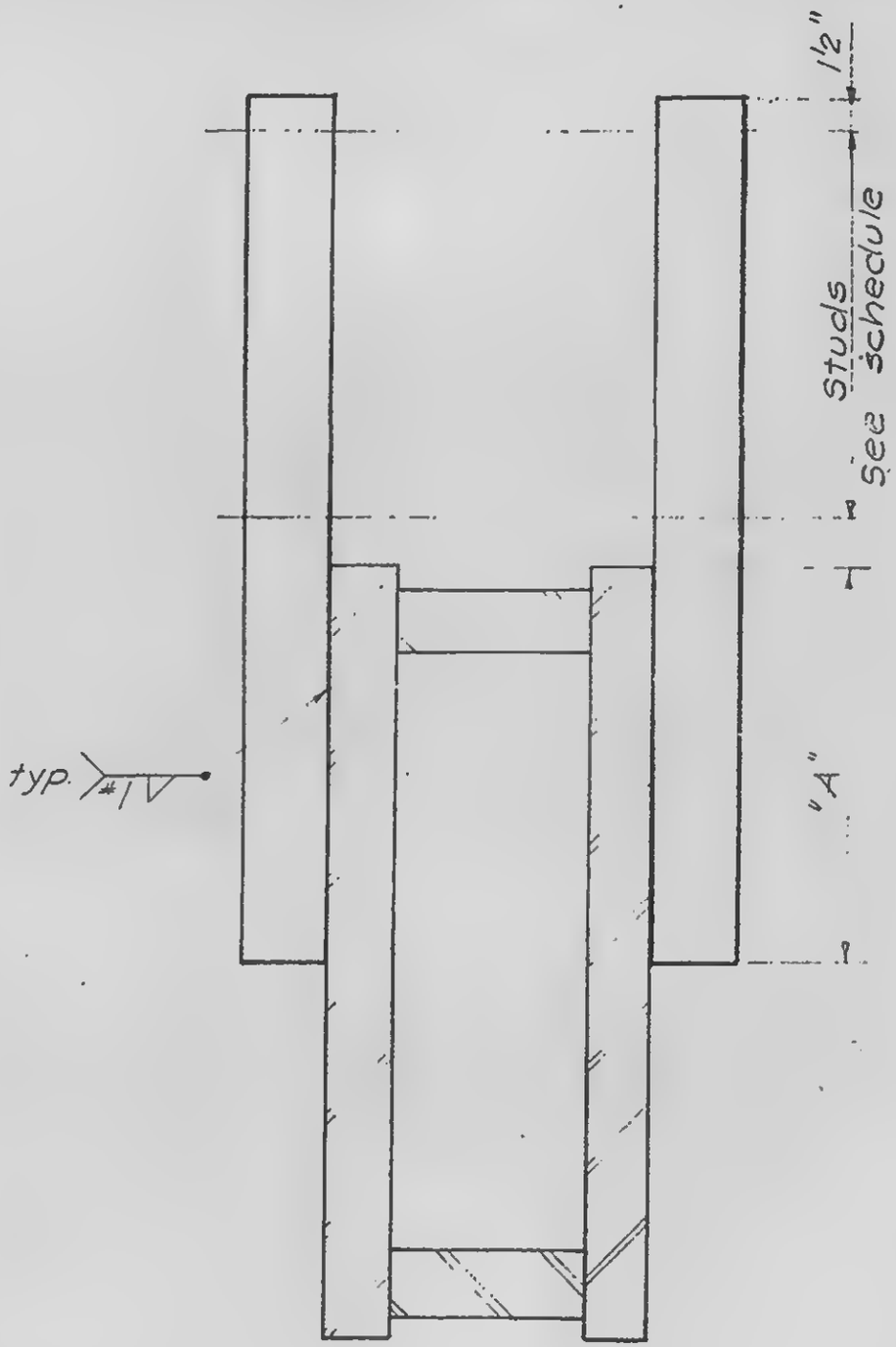
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18-AB2-7

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 8. | DATE 10/16/68

REVISIONS



See Note 6 18-AB2-2					
Detail No.	Strap	Studs	Elev	Dimen "A"	Weld No. 1
8.1	6"x7/8"x4'-10 1/2"	2x5/3/4	—	2'-3"	1/2
8.2	4x7/8x5-1 1/2	7/3/4	—	1-6	1/2

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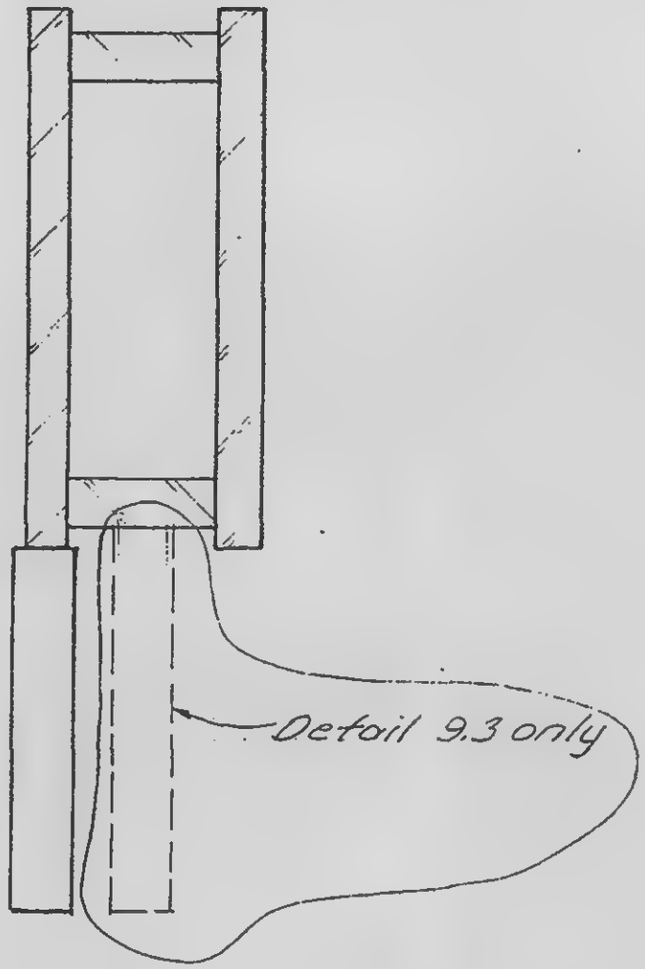
18-AB2-8

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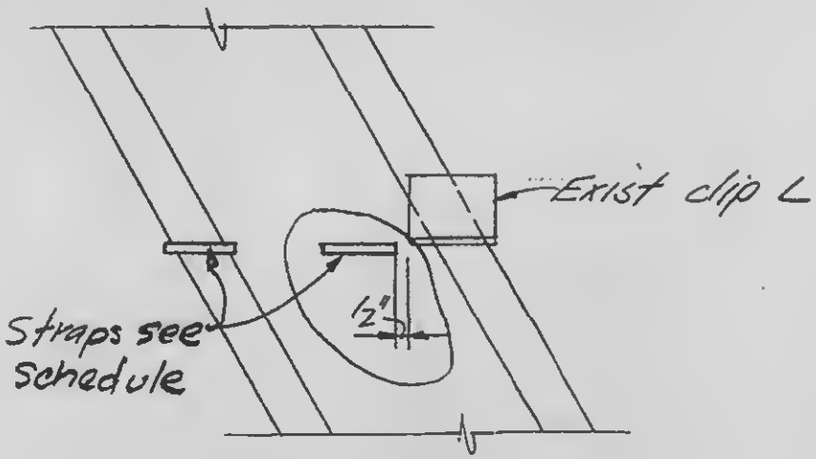
PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 9 | DATE: 10/30/68

REVISIONS

12/13/68
5-20-69
5-28-69
10-1-69



See Note 6 18-AB2-2			
Detail N°	Strap	Studs	Elev
9.1	3"x3/4"x2'-7 1/2	5|3/4	(-3 3/4)
9.2	3x3/4x4 4 1/2	8|5/8	(-4)
9.3	3x3/4x4-4 1/2	8|5/8	(-3 1/4)
9.4	3x3/4x3-0	5|5/8	(-7)
9.5	3x3/4x3-6	6|3/4	(-7)



Elev. 9.3

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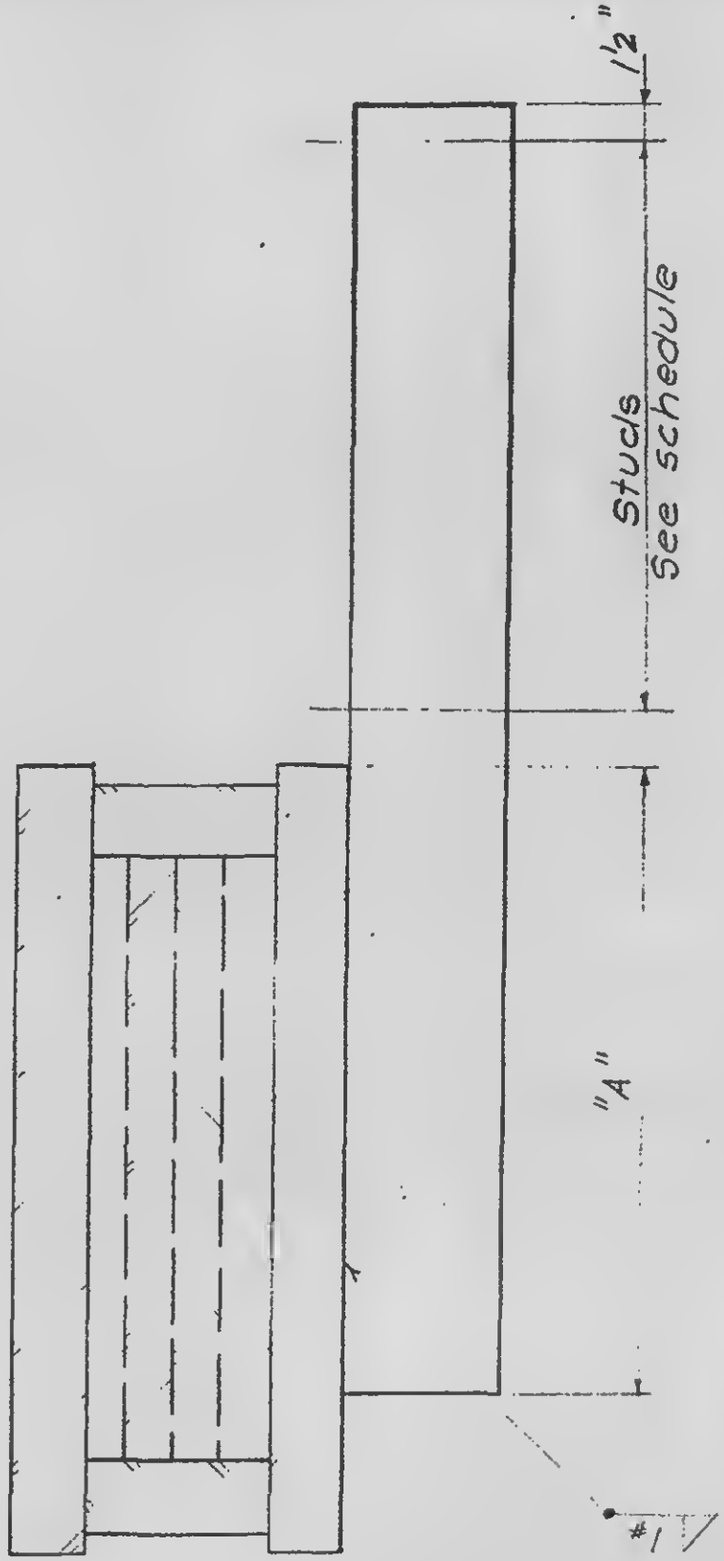
18-AB2-9

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 10 | DATE 10-16-68

REVISIONS

-69



See Note 6 : 18-AB2-2					
Detail No.	Strap	Studs	Elev.	Dimen "A"	Weld #1
10.1	11"x1"x7'-11½"	3x7/3/4	—	4'-4"	½
10.2	7x1x5'-1½"	2x7/3/4*	—	2'-6"	5/8

* Longitudinal spacing 4½"

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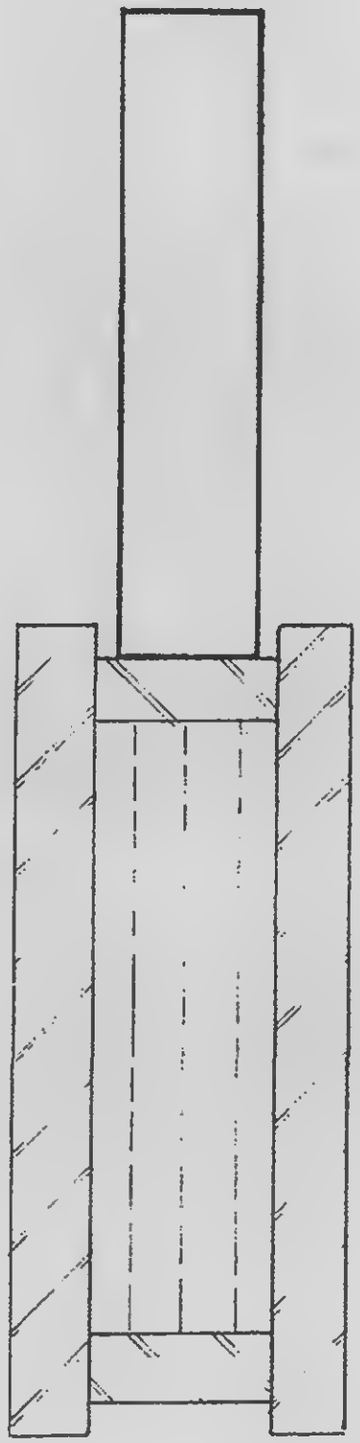
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18-AB2-10

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See Note 6 - 18-AB2-2			
Detail No	Strap	Studs	Elev
11.1	10" x 3/4" x 3'-9"	3x7/5/8	—

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18-AB2-11

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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 12 | DATE: 2-1-69

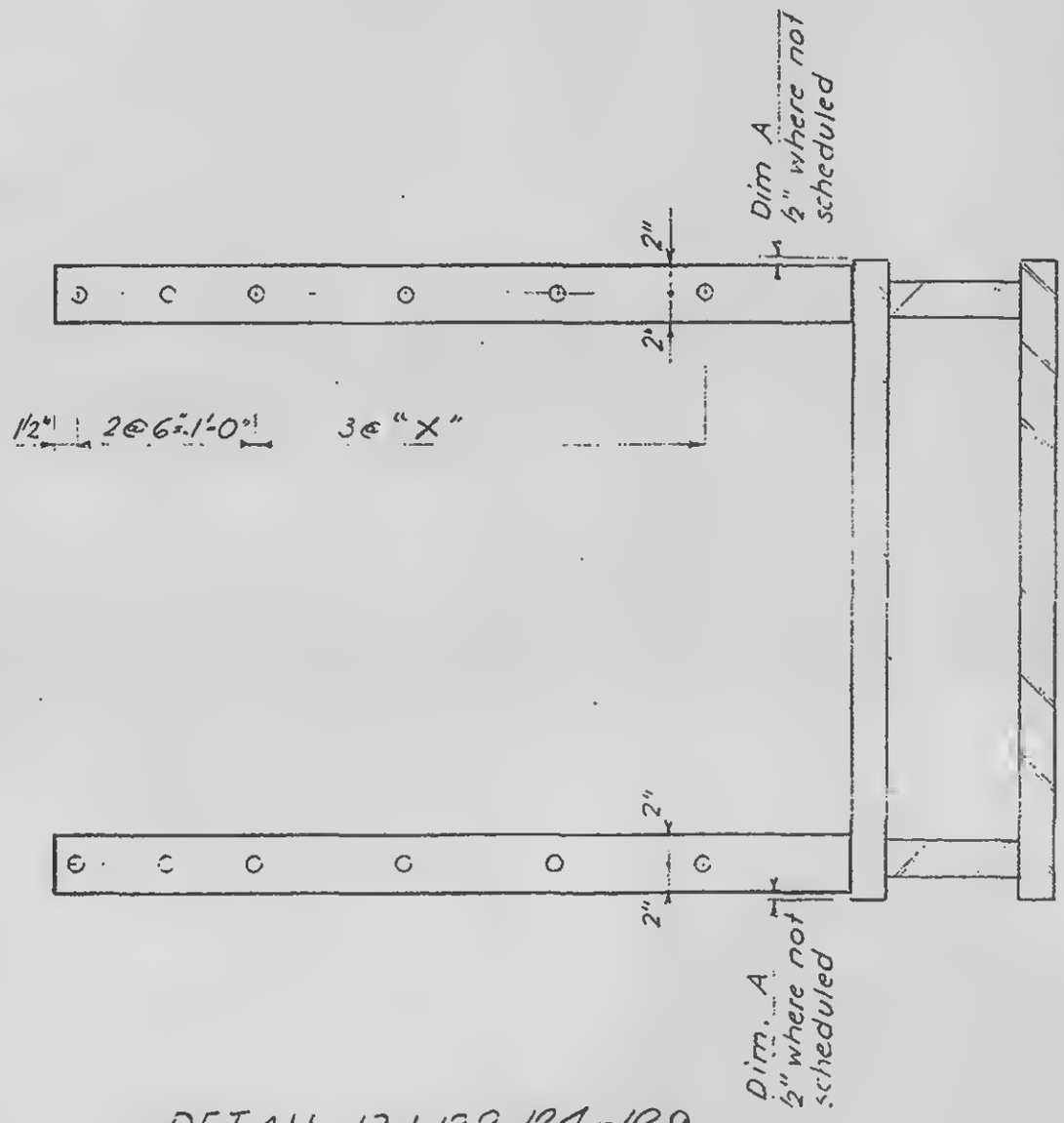
REVISIONS

4-30-69

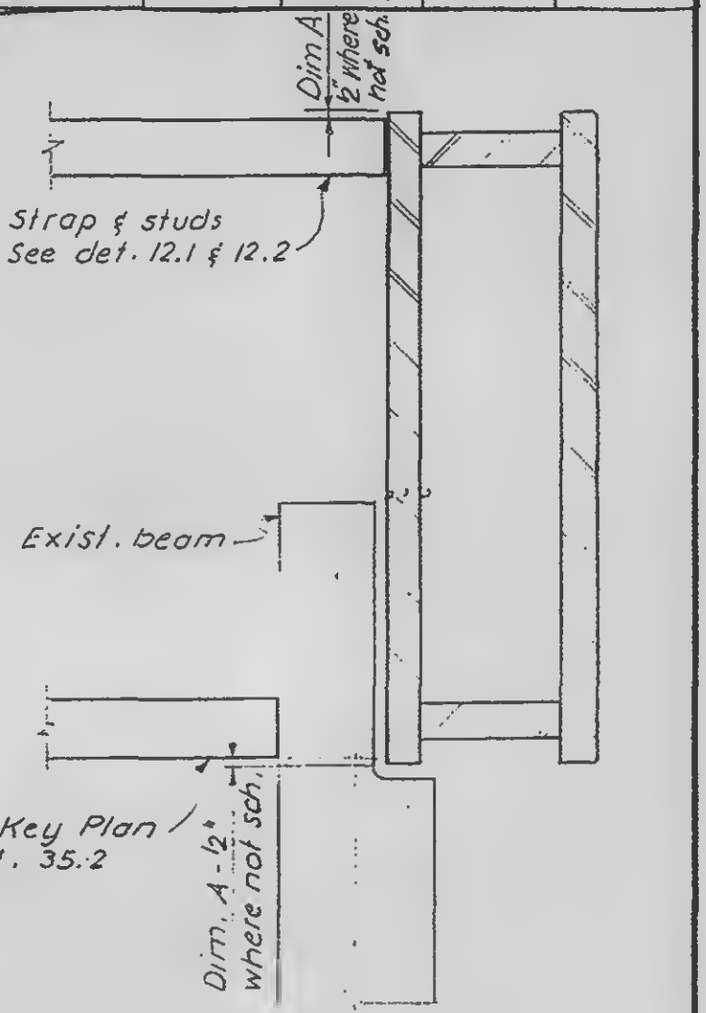
10-1-69

See Note 6 18-AB 2-2

Detail No.	Strap	Studs	Elev.	Dim. A	Spacing "X"
12.1	4"x½"x4'-6"	5/8"	(-3½)	—	10"
12.2	4"x½"x4'-6"	5/8"	(-3½)	5"	10"
12.3	4"x½"x4'-6"	5/8"	(-3½)	4½"	10"
12.4	4"x½"x3'-9½"	5/8"	(-3½)	—	8"
12.5	4"x½"x3'-9½"	5/8"	(-3½)	5	8"
12.6	4"x½"x3'-9½"	5/8"	(-4½)	—	8"
12.7	4"x½"x3'-9½"	5/8"	(-3½)	6½"	8"
12.8	4"x½"x3'-9½"	5/8"	(-3½)	9½"	8"
12.9	4"x½"x4'-6"	5/8"	(-3½)	6½"	10"



DETAIL 12.1, 12.2, 12.4-12.9



DETAIL 12.3

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18-AB2-12

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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 13 | DATE: 2-7-69

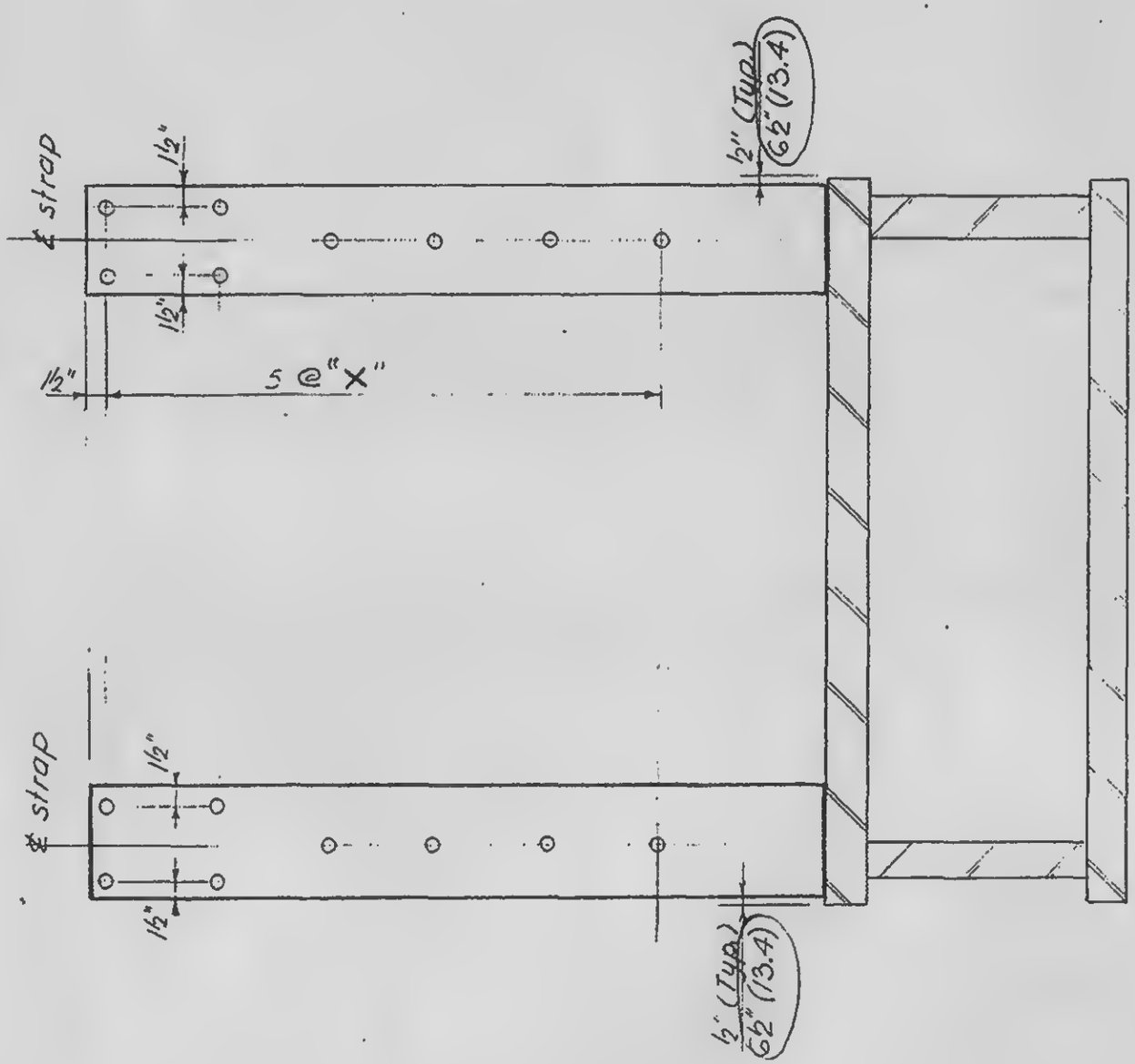
REVISIONS

4-30-69

10-1-69

See Note 6 18-AB2-2

Detail No.	Strap	Studs	Elev.	Spacing "X"
13.1	8"x½"x 4'-6"	¾"	(-3½)	8"
13.2	6"x ½"x 4'-6"	⅝"	(-3½)	8"
13.3	8"x ½"x3'-9½"	¾"	(-3½)	7"
13.4	6"x½"x4'-6"	⅝"	(-3½)	8"



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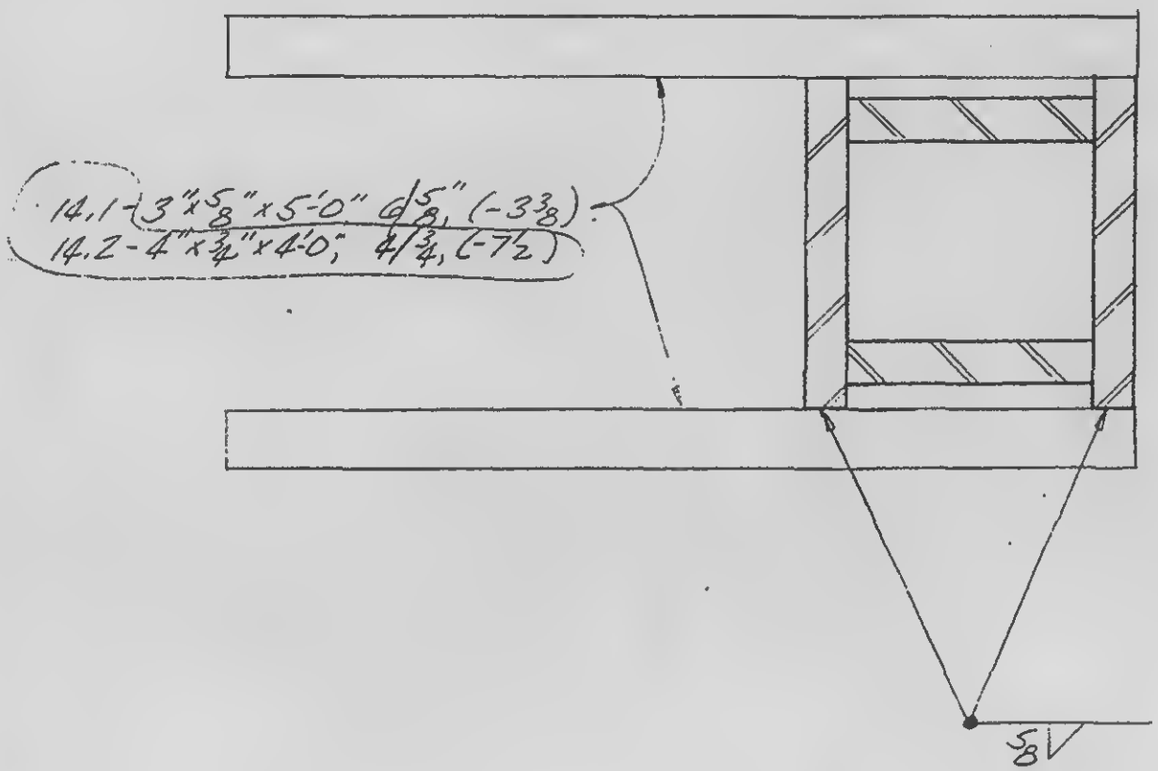
18-AB2-13

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PROJECT	TITLE	DATE
THE WORLD TRADE CENTER	STRAP ANCHORS - CORE - DETAIL 14	4/30/69

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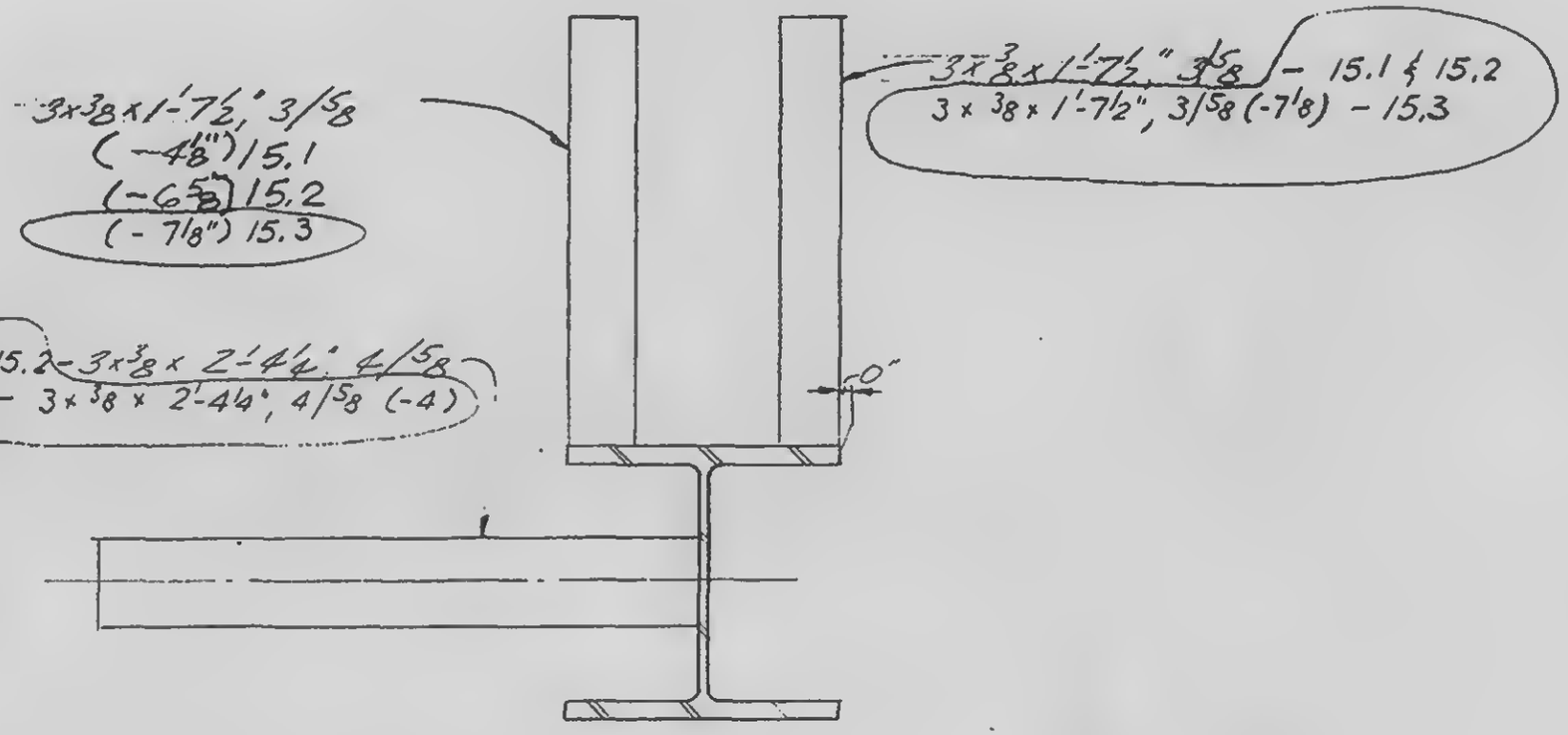
18-AR2-14

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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE DETAIL 15 | DATE: 4/30/69

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8-69



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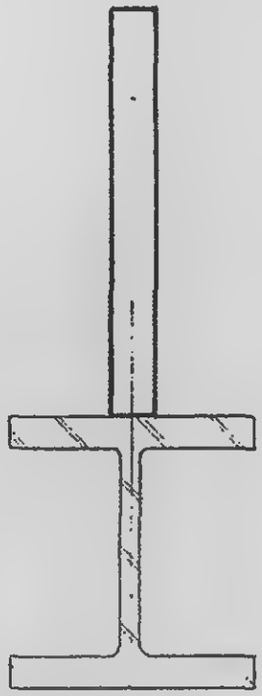
18-ABZ-15

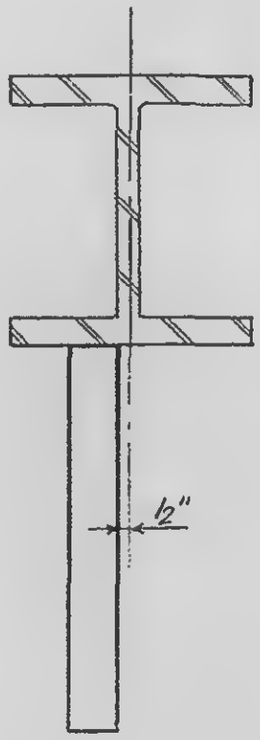
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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 16 | DATE: 4/30/69

REVISIONS

F 8-69





See Note 6-18-AB2-2			
Detail No	Strap	Studs	Elev.
16.1	3" x 3/8" x 3'-3"	3/5/8	(-3 5/8)
16.2	3" x 3/8" x 2'-1½"	4/5/8	(-3 7/8)
16.3	3" x 3/8" x 1'-7½"	3/5/8	(-4 1/8)
16.4	3" x 3/8" x 2'-1½"	4/5/8	(-3 5/8)
16.5	3" x 3/8" x 3'-3"	3/5/8	(-6 1/8)
16.6	3" x 3/8" x 1'-7½"	3/5/8	(-7 5/8)

Detail 16.1, 16.3, 16.4, 16.5, 16.6

Detail 16.2

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18-AB2-16

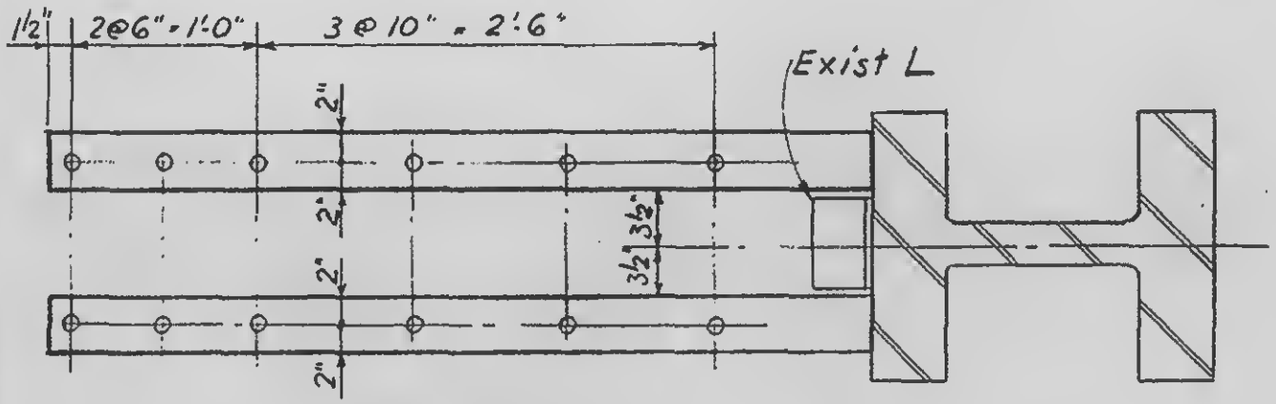
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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 17 | DATE: 4/30/69

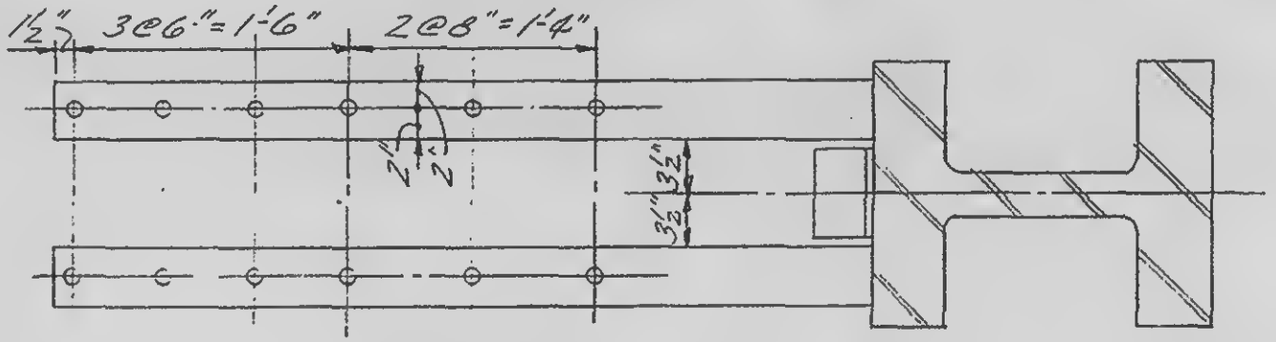
REVISIONS

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Detail No	Strap	Studs	Elev.
17.1	4"x½"x 4'-6"	⅝"	(-3½)
17.2	4"x½"x4'-6"	⅝"	(-3½)
17.3	4x½x3'-9½"	⅝"	(-3½)
17.4	3x⅜x1'-6"	2/⅝"	(-7⅝)

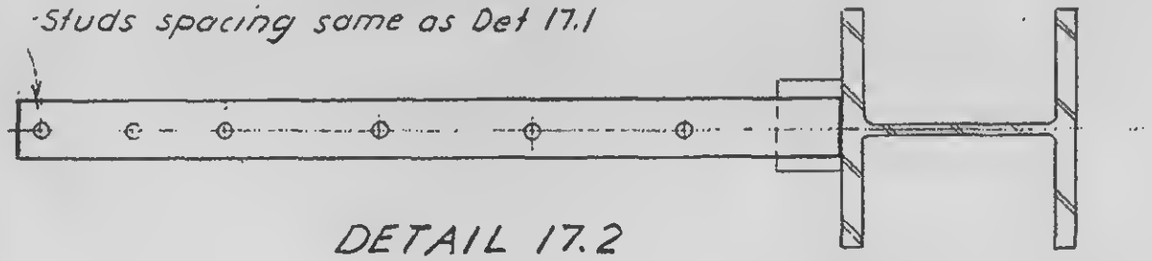


DETAIL 17.1

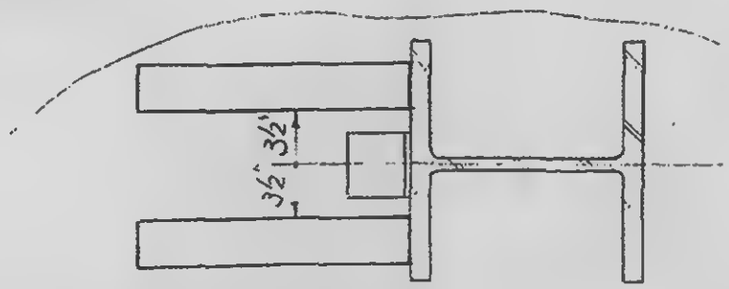


DETAIL 17.3

Studs spacing same as Det 17.1



DETAIL 17.2



DETAIL 17.4

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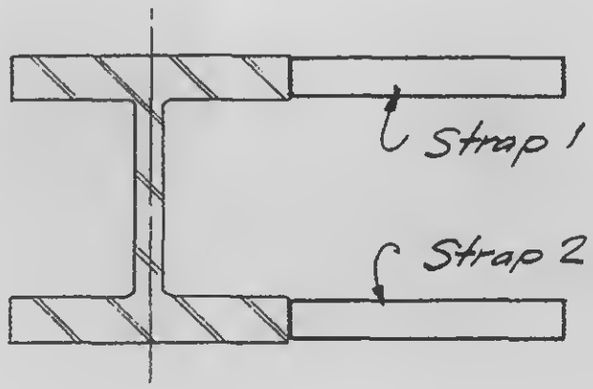
18-AB2-17

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PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 18 | DATE: 4/30/69

REVISIONS

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See Note 6 18-AB2-2

Detail No	Strap	Studs	Elev. Strap 1	Elev. Strap 2
18.1	3 x 3/8 x 1'-6"	3/5/8	(-7 5/8)	(-7 5/8)
18.2	3 x 3/8 x 1'-6"	3/5/8	(-7 5/8)	(-6 5/8)
18.3	3 x 3/8 x 1'-6"	2/5/8	(-7 5/8)	(-7 5/8)

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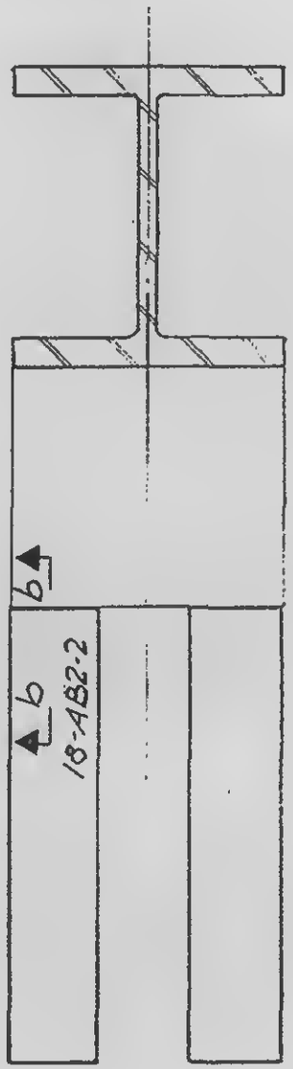
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18-AB2-18

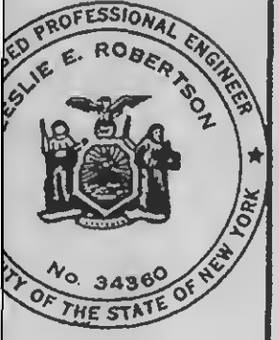
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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR - CORE - DETAIL 19 | DATE 4/30/69

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See Note 6 18-AB2-2			
Detail No	Strap	Studs	Elev
19.1	6 × ½ × 2'-6"	2 × 5/8	(-3¼)



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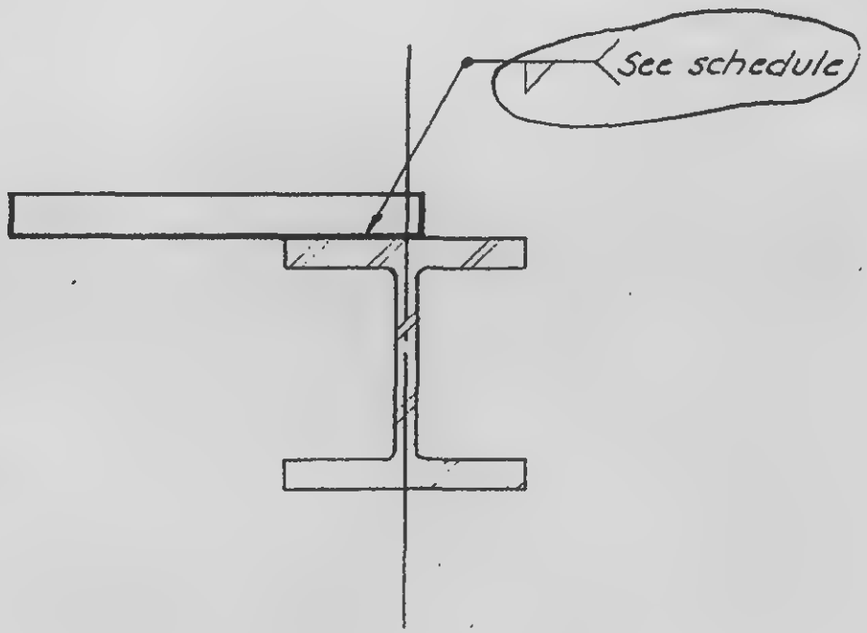
18-AB2-19

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 20 | DATE 12-13-68

REVISIONS

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See Note G 18-AB2-2

Detail Nº	Strap	Studs	Elev	Weld
20.1	3"x⅝"x2'-10½	4/¾	—	⅜ V 9
20.2	3"x⅜"x2'-10"	4/⅝	(-3)	⅜ V 8½
20.3	3"x⅜"x2'-3"	3/⅝	(-4⅛)	5/16 V 7½
20.4	4"x½"x3'-0"	4/¾	(-4)	½ V 10½

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18-AB2-20

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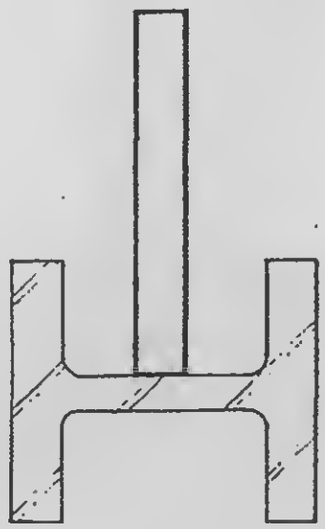
PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR STRAPS - CORE - DETAIL 21 | DATE: 10/30/68

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See Note 6 18-AB2-2			
Detail No	Strap	Studs	Elev
21.1	3"x3/8"x2'-3"	3/5/8	(-4")
21.2	4"x3/4"x3'-9"	6/3/4	(-3 3/4")
21.3	3"x3/8"x2'-3"	3/5/8	(-4 1/8")
21.4	3"x3/8"x2'-6"	3/5/8	(-4 1/8")
21.5	3"x3/8"x2'-3"	3/5/8	(-6 5/8")
21.6	3"x1/2"x2'-3"	3/3/4	(-7 1/2)
21.7	3"x1/2"x2'-9"	3/3/4	(-7 1/2)

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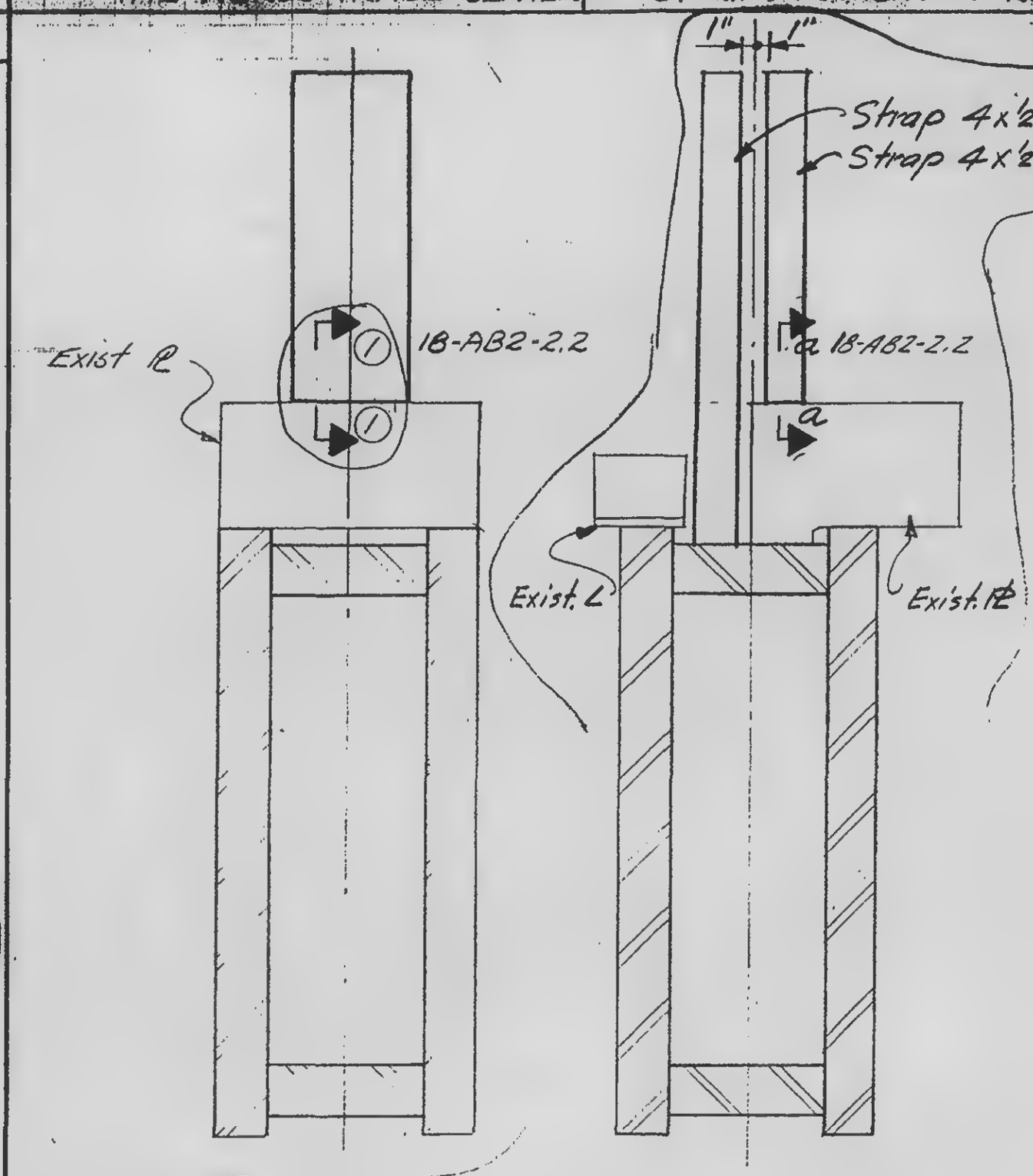
18-AB2-21

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 22 | DATE 10/30/68

REVISIONS

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See Note 6 -18-AB2-2

Detail N°	Strap	Studs	Elev.	Section 1-1
22.1	10"x½"x2'-7½	3x5/⅝	(-3)	a-a
22.2	12"x½"x2'-7½	3x5/⅝	(-3)	a-a
22.3	7"x½"x2'-7½	2x5/⅝	(-3)	a-a
22.4	4"x½"x4'-0	8/⅝	(-34)	b-b

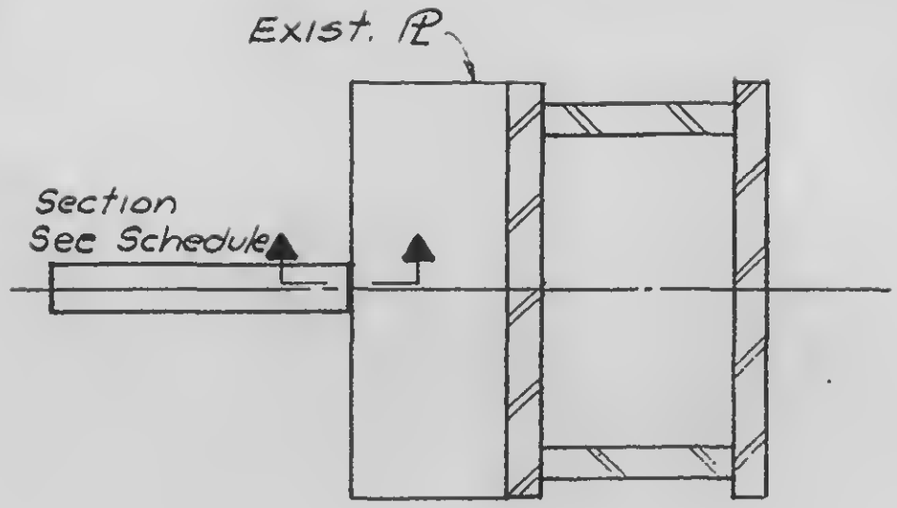
Detail 22.1 - 22.4

Detail 22.5

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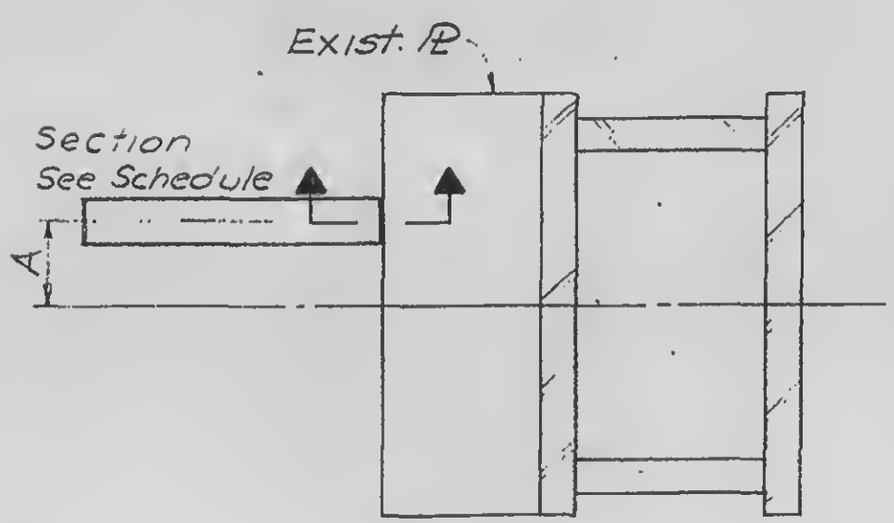
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18-AB2-22

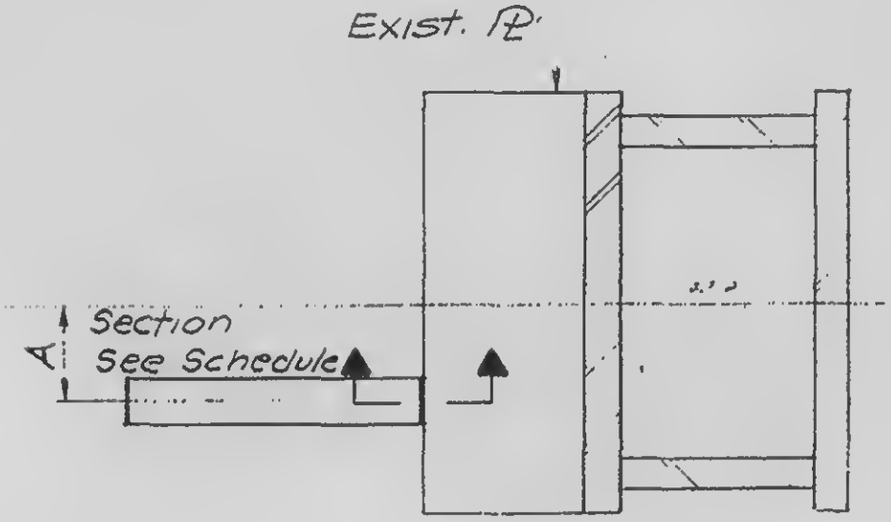


TYPE A

See Note 6 - 18-AB2-2						
Detail Nº	Strap	Studs	Elev	Type	Dimen. "A"	Section 18-AB2-2
23.1	4"x1/2"x2'-7 1/2"	5/3 4	(-5 3/4)	B	9 1/2"	b-b
23.2	4x1/2x3-1 1/2	6/5 8	(-3 1/4)	B	9 1/2	b-b



TYPE B



TYPE C

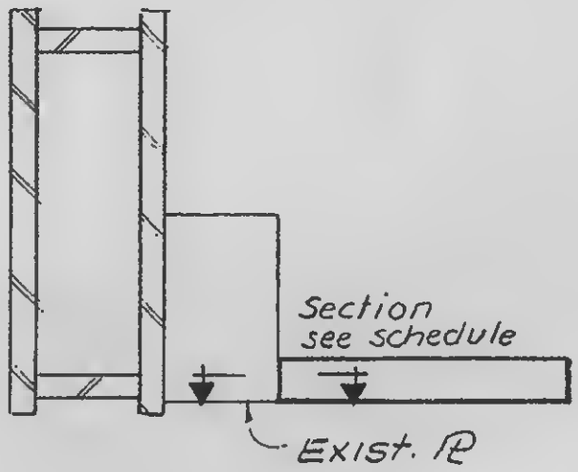
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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 24 | DATE 10/30/68

REVISIONS

12-13-68
2-7-69
4-30-69
5-20-69
5-28-69
10-1-69



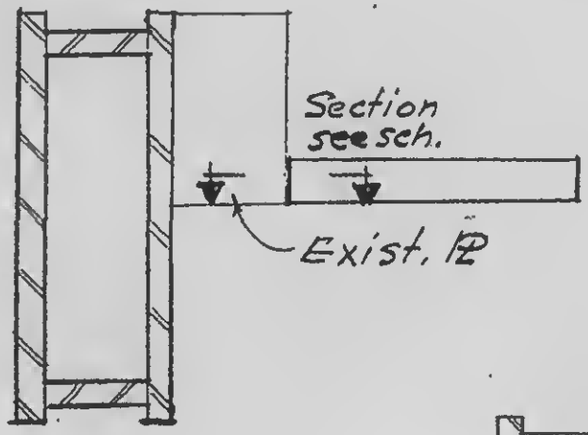
24.1 - 24.11, 24.13, 24.14

24.16, 24.17

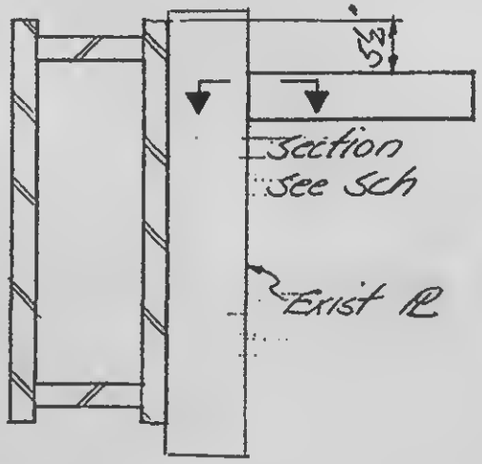
See Note 6 - 18-AB2-2

Detail Nº	Strap	Studs	Elev	Section (18-AB2-2)
24.1	4"x3/8"x2'-1 1/2"	4/5/8	(-3'8)	a-a
24.2	3"x3/8"x1'-7 1/2"	3/3/4	(-5'7/8)	b-b
24.3	4"x1/2"x2'-11"	6/5/8	(-5'3/4)	b-b
24.4	4"x1/2"x2'-11"	6/5/8	(-5'1/2)	a-a
24.5	3"x3/8"x2-1/2"	4/5/8	(-3'3/8)	b-b
24.6	5"x3/8"x1-6"	3/3/4	(-6'5/8)	a-a
24.7	3"x3/8"x1-6"	3/5/8	(-6'5/8)	a-a
24.8	3"x3/8"x1'-6"	3/5/8	(-3'3/8)	b-b
24.9	3"x3/8"x1'-6"	3/5/8	(-3'1/8)	a-a
24.10	3"x3/8"x2'0"	4/5/8	(-3'3/8)	b-b
24.11	3"x3/8"x2'0"	4/5/8	(-5'7/8)	b-b
24.12	10"x5/8"x5'6"	2x10 5/8	(-3'1/2)	b-b
24.13	5"x3/4"x5'-1 1/2"	10/5/8	(-3)	b-b
24.14	5"x3/4"x5'-1 1/2"	10/5/8	(-9 1/2)	b-b
24.15	4"x1/2"x2'-11"	7/5/8 *	(-5'3/4)	b-b
24.16	3"x3/8"x1'-6"	3/5/8	(-6'3/4)	a-a
24.17	3"x3/8"x1'-6"	3/5/8	(-5'5/8)	a-a

* @ 5" c.c.



24.12



24.15

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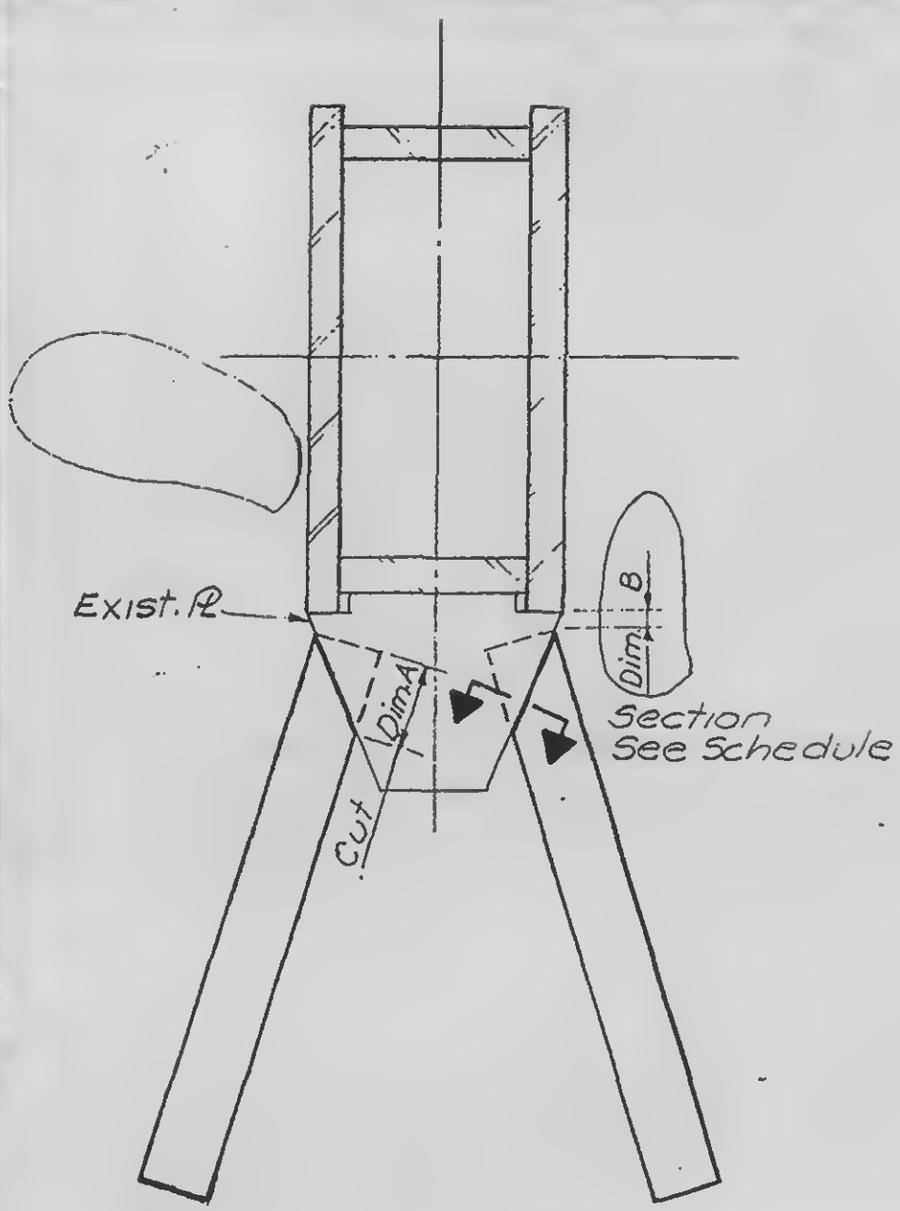
18-AB2-24

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 25 | DATE 10/30/68

REVISIONS

2-7-69



See Note 6 · 18-AB2-2

Detail Nº	Strap	Studs	Elev	Dim A	Section (18-AB2-2)	Dim. B
25.1	5"x1/2"x3'-7 1/2"	7/5B	(-3 1/4)	6"	b-b	1"
25.2	5"x1/2"x3'-7 1/2"	7/5B	(-3)	6"	a-a	1"
25.3	4"x3/4"x4'-7 1/2"	9/5B	(-3)	5 1/2"	b-b	1"
25.4	4"x1/2"x3'-1 1/2"	6/5B	(-3)	2"	a-a	1"
25.5	5 1/2"x5/8"x3'-3"	2x6/5B	(-3 1/8)	6 3/8"	b-b	3/4"

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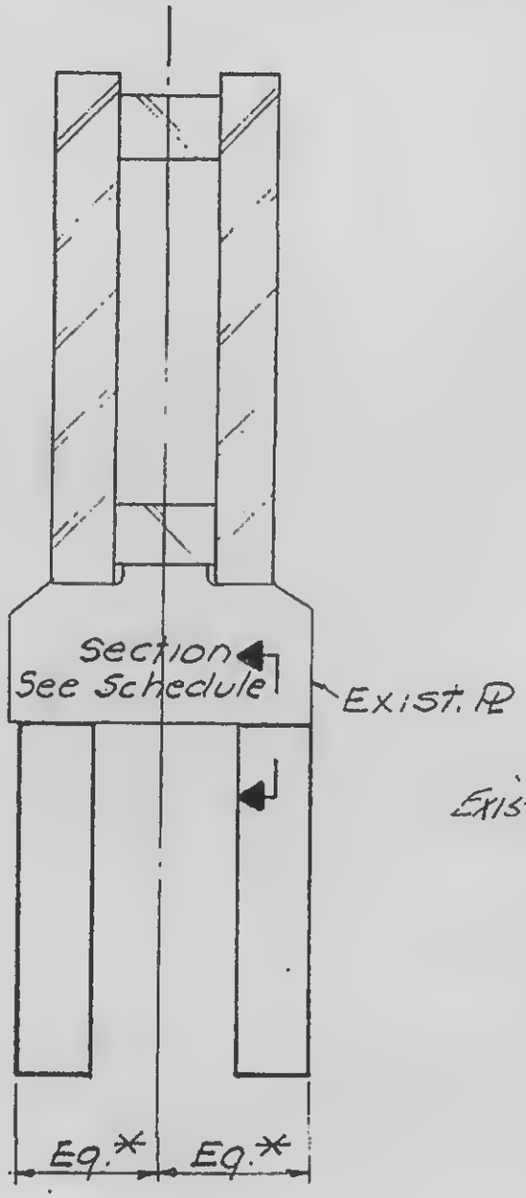
18-AB2-25

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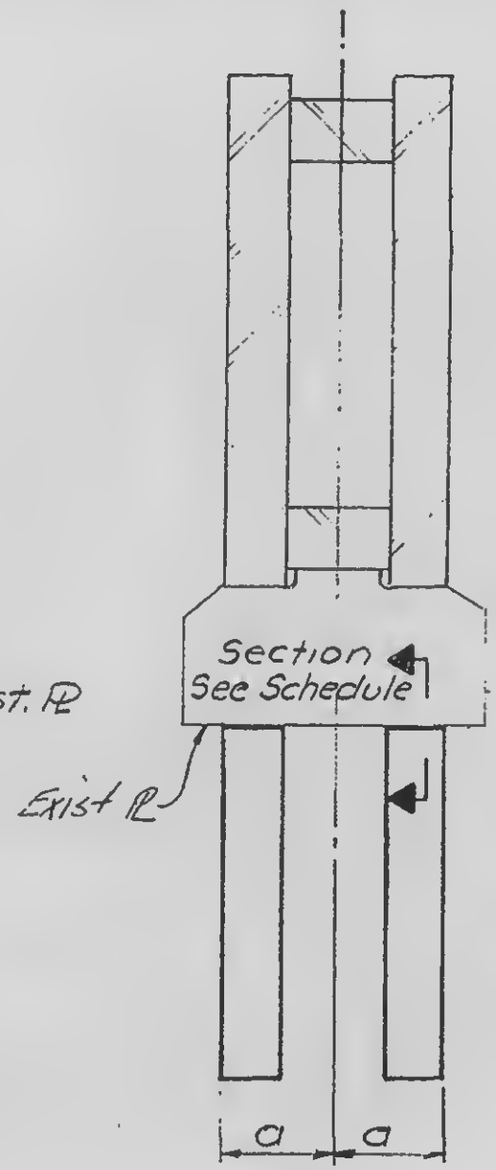
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 26 | DATE 12-13-68

REVISIONS

4-30-69
5-20-69
5-28-69



TYPE A



TYPE B

* Dimension to be maximum possible, consistent with symmetry about column ℄.

See note 6 — 18-AB2-2

Detail No.	Strap	Studs	Elev	Type	Dimen. "a"	Sect. 18-AB2-2
26.1	6"x½"x2'-7½"	5/7/8	(-5½)	A	—	a-a
26.2	6"x½"x2'-1½"	4/7/8	(-5½)	A	—	a-a
26.3	6"x½"x2'-1½"	2x4/5/8	(-3)	A	—	a-a
26.4	5"x½"x3'-0"	6/5/8	(-5)	B	12"	a-a
26.5	5"x½"x3'-0"	6/5/8	(-5)	B	10"	a-a
26.6	6"x5/8"x2'-0"	2x4/3/4	(-6 5/8)	B	9"	b-b
26.7	6"x½"x2'-6"	2x5/5/8	(-3)	B	8½"	a-a
26.8	6"x½"x2'-6"	2x5/5/8	(-3⅜)	B	8½"	a-a
26.9	6"x½"x2'-6"	2x5/5/8	(-5½)	B	8½"	a-a
26.10	5"x½"x3'-7½"	7/5/8	(-3¼)	A	—	b-b
26.11	6"x¾"x3'-0"	2x6/5/8	(-3)	A	—	b-b
26.12	4"x½"x2'-0"	4/5/8	(-3¼)	B	8½"	b-b
26.13	6"x⅝"x1'-10½"	2x4/3/4	(-6⅞)	A	—	b-b
26.14	8"x½"x2'-0"	2x4/3/4	(-7)	A	—	b-b
26.15	6"x½"x1'-10½"	2x3/3/4	(-7)	A	—	b-b
26.16	6"x½"x1'-10½"	2x3/3/4	(-6¾)	B	10"	b-b

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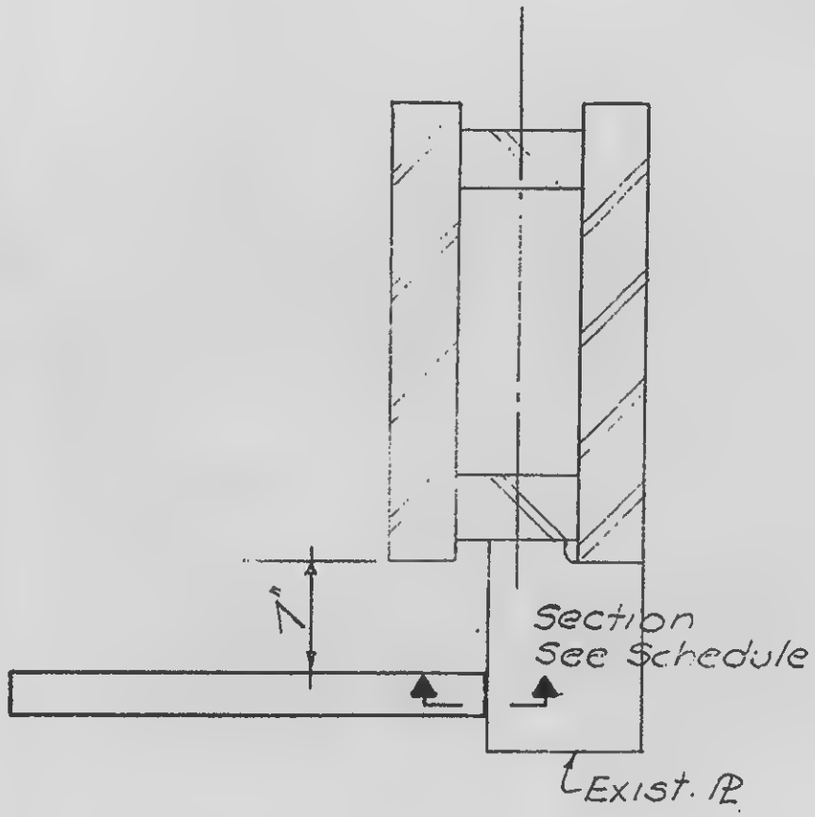
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18-AB-2-26

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REVISIONS



See Note 6 . 18-AB2-2				
Detail No	Strap	Studs	Elev.	Section (18-AB2-2)
27.1	3"x1/2"x2'-1 1/2	4 1/4	(-5 1/2)	a-a
27.2	3x1/2x2-7 1/2	5/5/8	(-3)	a-a
27.3	3x3/4x2-1 1/2	4 1/4	(-6 1/2)	b-b

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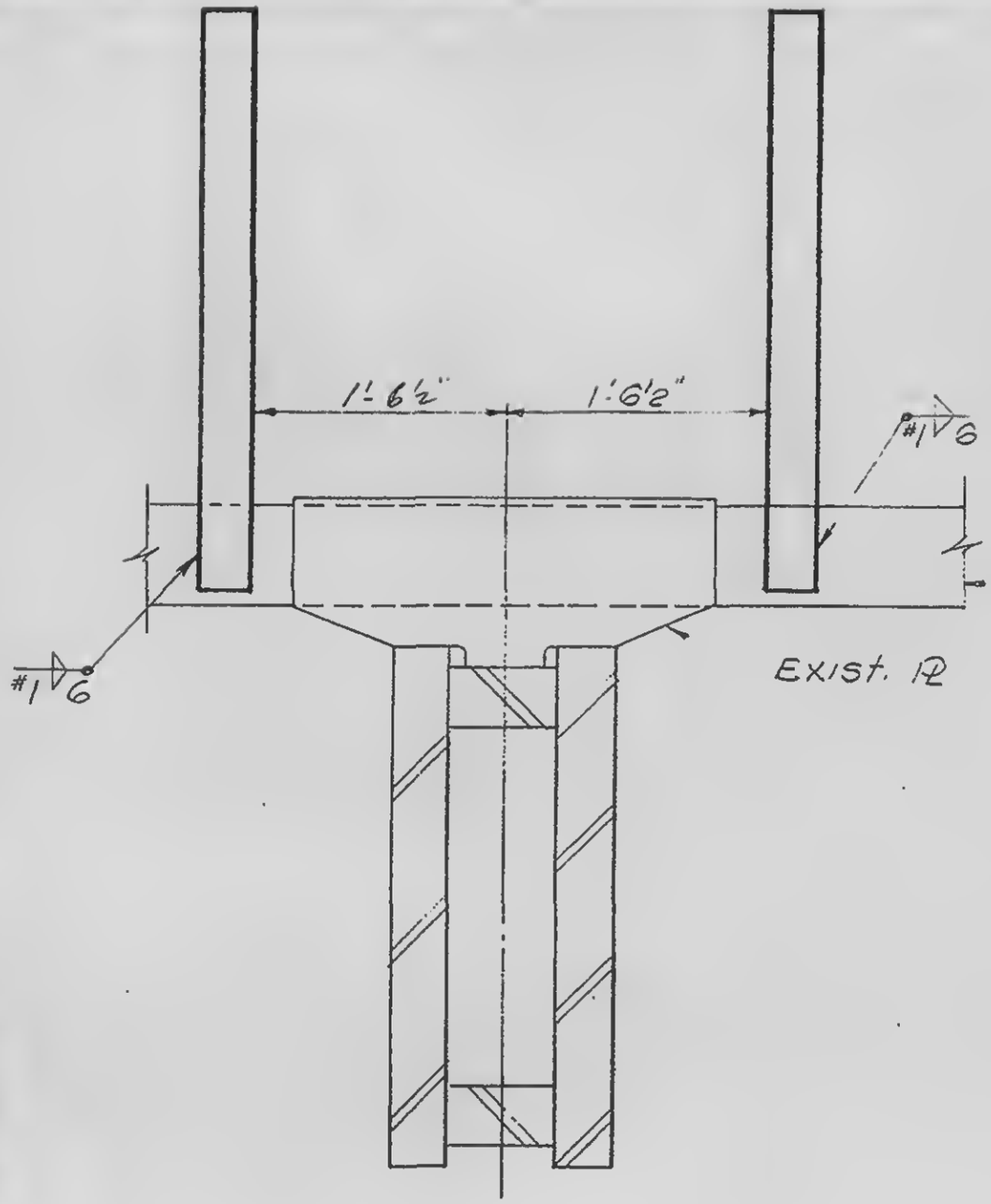
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18-AB2-27

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REVISIONS



See note 6 18-AB2-2

Detail Nº	Strap	Studs	Elev	Weld #1
28.1	4"x½x2'-7½	4|5-8	—	¼
28.2	4x½x2-6	4|3-4	—	5/16

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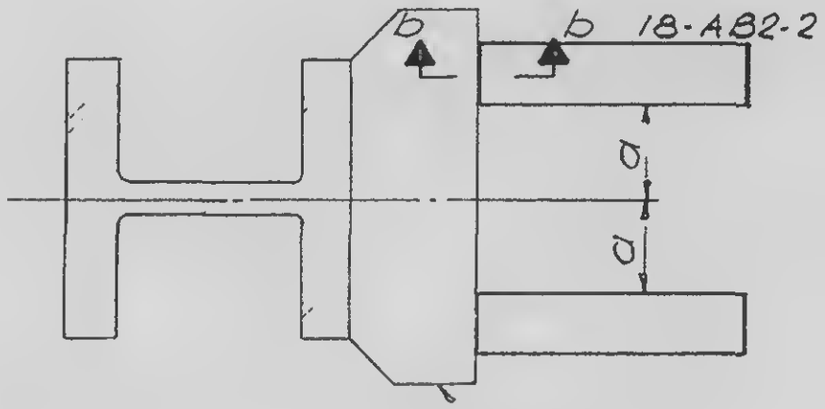
18-AB2-28

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PROJECT THE WORLD TRADE CENTER | TITLE ANCHOR STRAPS - CORE - DETAIL 29 | DATE 12-13-68

REVISIONS

4-30-69
7-14-69



EXIST. ℄

See Note G 18-AB2-2

Detail Nº	Strap	Studs	Elev	Dimen a
29.1	4"x3/8"x1'-6"	3/5B	(-6 7/8)	5"
29.2	3"x5/16"x1'-6"	3/5B	(-6 15/16)	5"
29.3	6"x1/2"x2'-0"	4/7B	(-6 3/4)	4 1/2"
29.4	6"x1/2"x2'-6"	2x5/5/8	(-3/4)	7"
29.5	6"x1/2"x2'-6"	2x5/5/8	(-3/4)	3 1/2"
29.6	6"x1/2"x2'-0"	2x4/5/8	(-3/4)	5"
29.7	6"x1/2"x2'-0"	2x4/5/8	(-3)	5"
29.8	3"x3/8"x1'-6"	3/5/8	(-3 3/8)	2"
29.9	6"x1/2"x2'-6"	2x5/5/8	(-3/4)	6"
29.10	6"x1/2"x2'-6"	2x5/5/8	(-3/4)	3"
29.11	6"x1/2"x2'-6"	2x5/5/8	(-5 3/4)	3"

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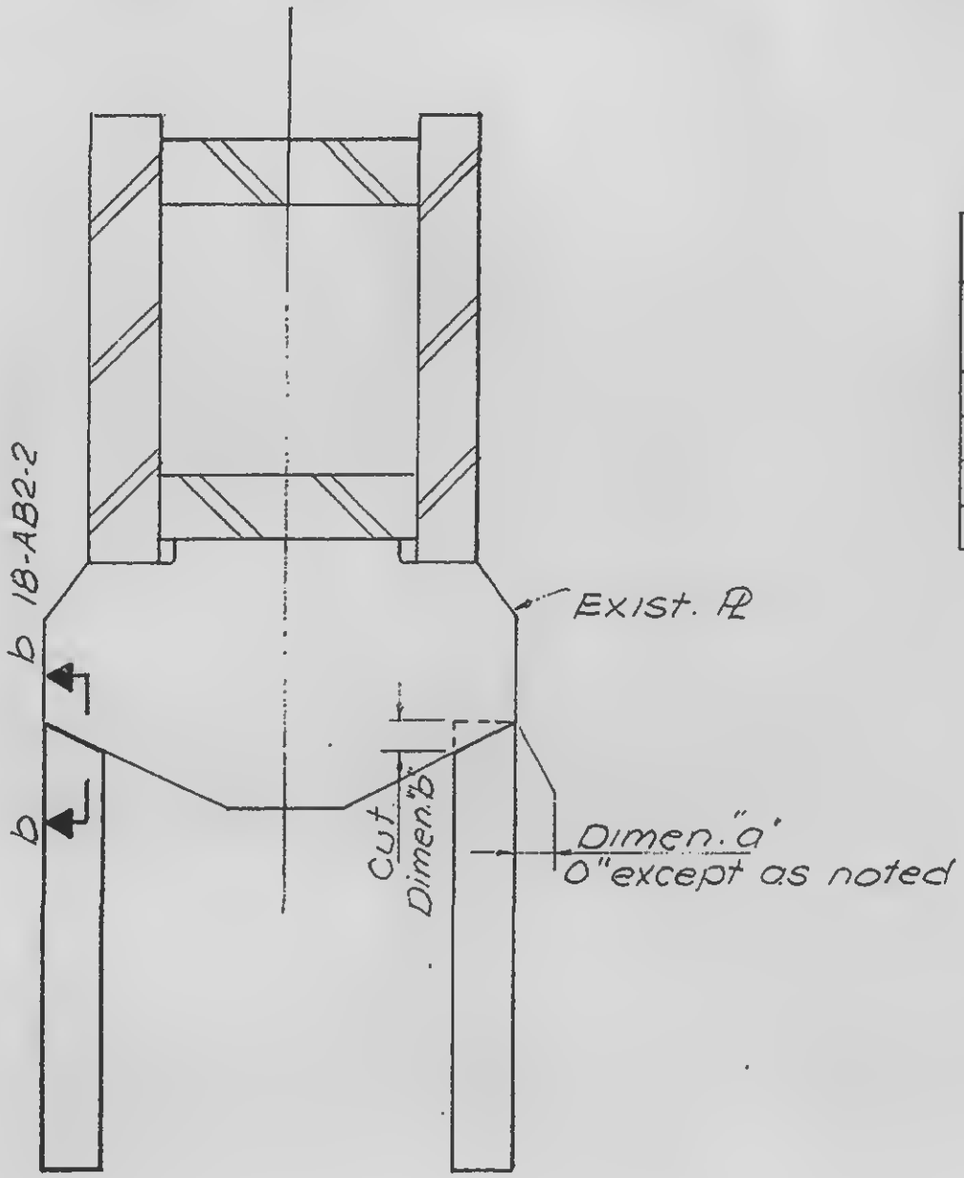
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18-AB2-29

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REVISIONS



See Note 6				18-AB2-2	
Detail Nº	Strap	Studs	Elev	Dimen "a"	Dimen "b"
30.1	4"x3/4"x2'-6	5/3/4	(-6'2)	—	2"
30.2	6x3/4x2-0	2x4/3/4	(-6'2)	5 1/2"	4 5/8"

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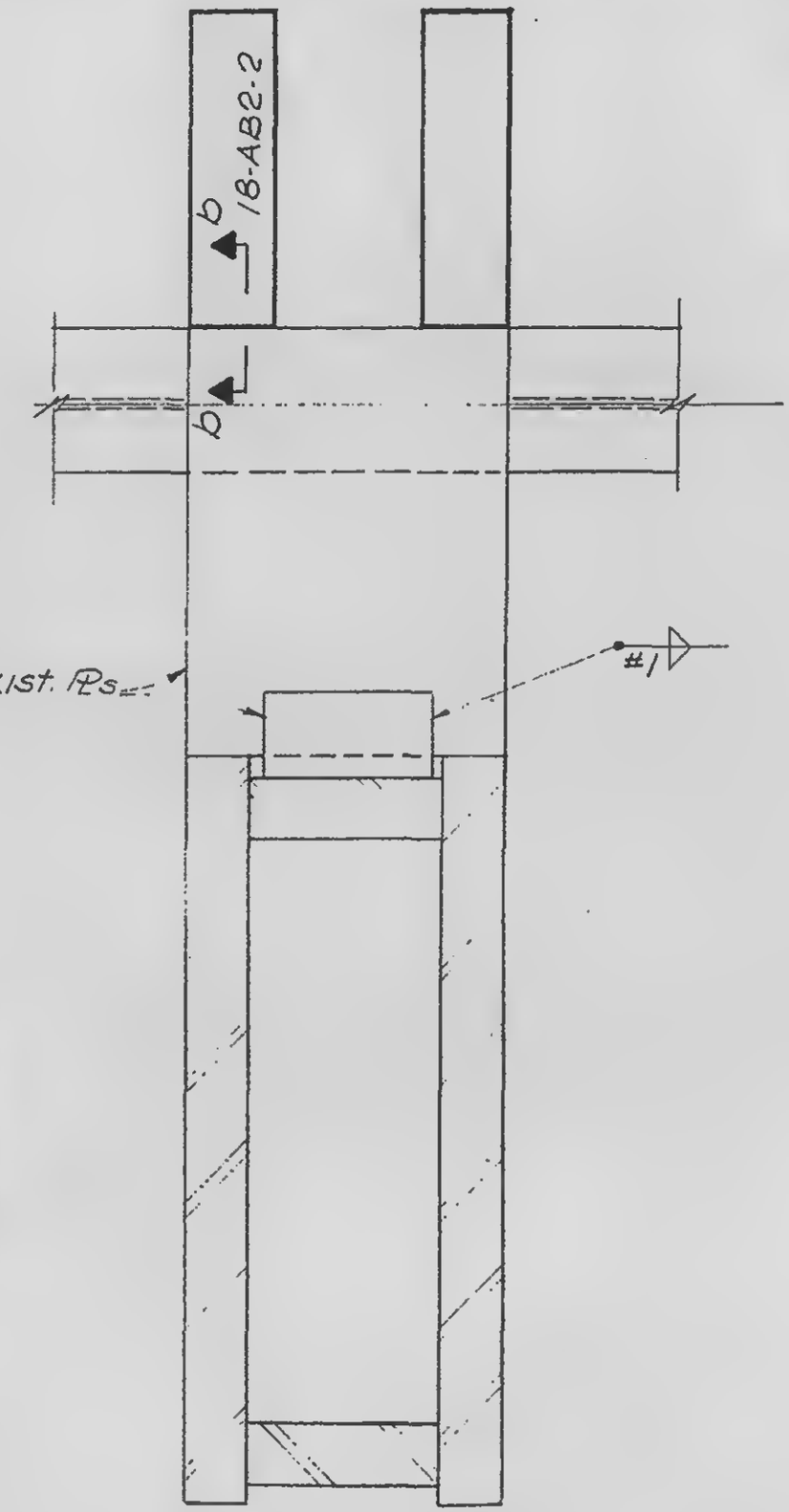
18-AB2-30

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REVISIONS

5-28-69



See Note G		18-AB2-2		
Detail Nº	Strap	Studs	Elev	Weld #1
31.1	6" x 5/8" x 1'-10½"	2x4 1/3/4	(-6 7/8)	5/8
31.2	8" x 1/2" x 2'-0"	2x4 1/3/4	(-7)	1/2
31.3	3" x 3/8" x 1'-6½"	3 1/5/8	(-6 7/8)	–

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18-AB2-31

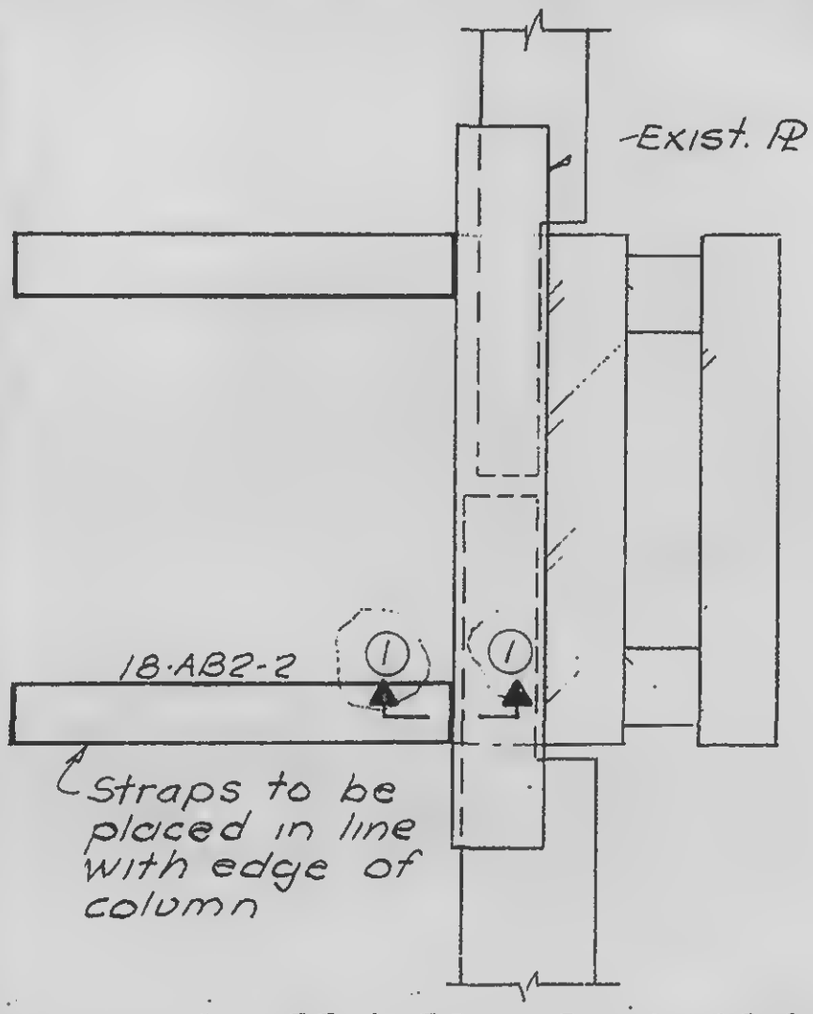
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REVISIONS

4-30-69

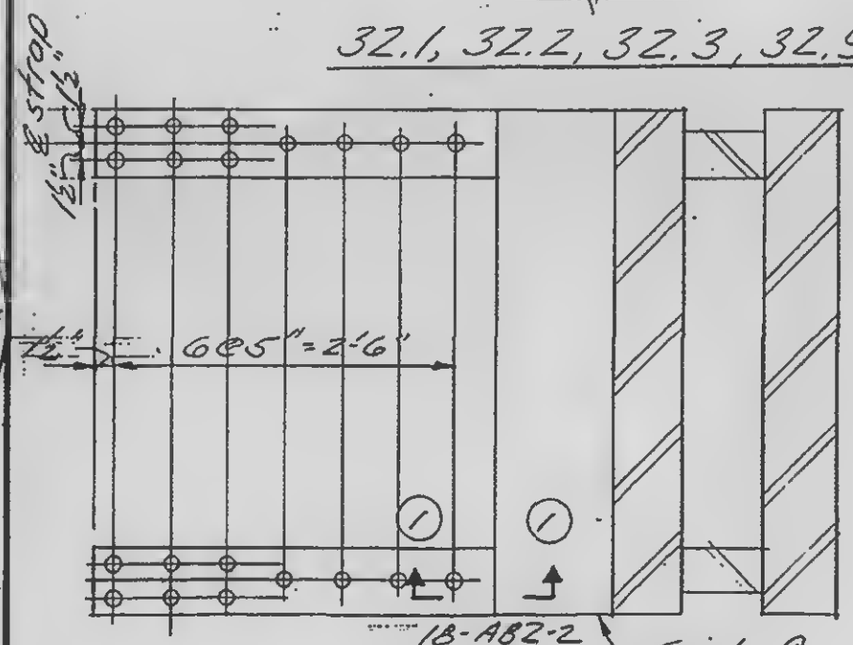
5-28-69



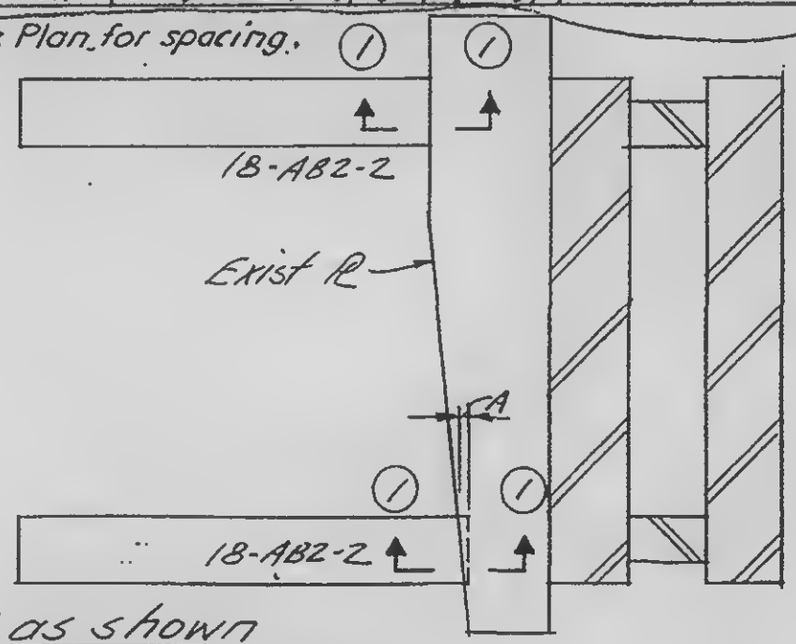
32.1, 32.2, 32.3, 32.9, 32.13-32.19

See Note 6, 18-AB2-2					
Detail No	Strap	Studs	Elev	Section 1 1	Cut A
32.1	4×½×2'-6"	5/5/8	(-5)	a-a	—
32.2	5×¾×2'-6"	5/7/8	(-6½)	a-a	—
32.3	6×½×4'-6"	9/5/8	(-5 3/8)	b-b	—
32.4	6×⅜×3'-0"	10/5/8 *	(-3)	b-b	—
32.5	4×½×3'-0"	5/5/8	(-5¾)	b-b	7/8
32.6	4×½×3'-0"	5/5/8	(-5¾)	b-b	7/8
32.7	6×⅜×4'-6"	9/5/8	(-3)	b-b	—
32.8	4×½×3'-6"	7/5/8	(-3¼)	c-c	1 3/8
32.9	10×⅜×4'-6"	8/¾	(-5 7/8)	b-b	—
32.10	8×½×3'-0"	10/5/8 *	(-3¼)	b-b	—
32.11	8×½×3'-0"	10/5/8 *	(-4¾)	b-b	—
32.12	4×½×3'-6"	6/5/8	(-3¼)	b-b	¾
32.13	6×½×2'-6"	2×4/5/8	(-5¼)	b-b	—
32.14	4×½×3'-6"	6/5/8	(-5¼)	b-b	—
32.15	6×½×2'-6"	4/7/8	(-6¾)	a-a	—
32.16	4×½×2'-6"	4/¾	(-6 7/8)	a-a	—
32.17	4×½×2'-6"	4/¾	(-6¾)	a-a	—
32.18	3×½×2'-6"	3/¾	(-7)	a-a	—
32.19	3×⅜×2'-6"	3/5/8	(-6 7/8)	a-a	—

* See Plan for spacing.



32.4, 32.10, 32.11



32.5 as shown
32.6, 32.7 & 32.12 opp hand

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18-AB2-32

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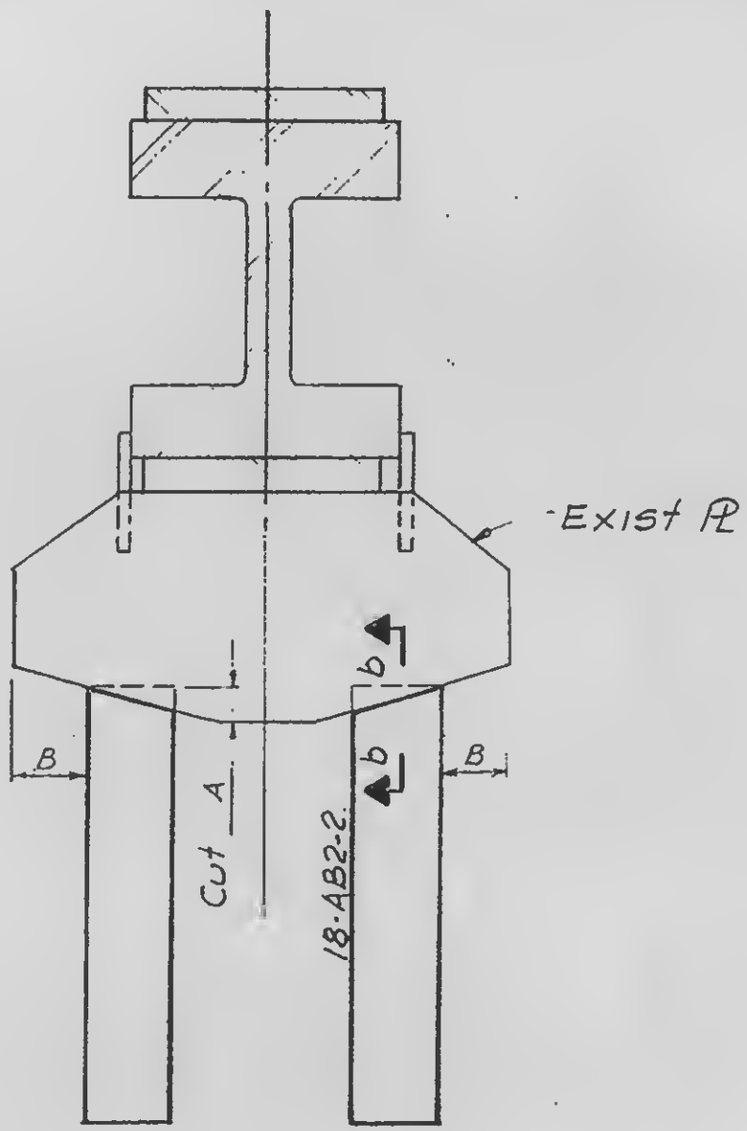
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS- CORE- DETAIL 33 | DATE 12-13-68

REVISIONS

2-7-69

4-30-69

5-28-69



See Note 6 18-AB2-2					
Detail No.	Strap	Studs	Elev.	Dim. A	Dim B
33.1	6"x 1/2" x 2'-6"	5/7/8	(-6 3/4)	1 3/8"	4 1/2"
33.2	3"x 3/8" x 1'-6"	3/5/8	(-3 3/8)	1 1/2"	4"
33.3	6"x 1/2" x 2'-0"	2x 4/5/8	(-3 1/4)	1 1/2"	6"
33.4	6"x 1/2" x 2'-6"	2x 5/5/8	(-3 1/4)	1 1/2"	4 1/2"
33.5	3"x 3/8" x 1'-6"	3/5/8	(-3 3/8)	1 1/2"	5"
33.6	3"x 3/8" x 1'-6"	3/5/8	(-6 7/8)	1 1/2"	4"

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18-AB2-33

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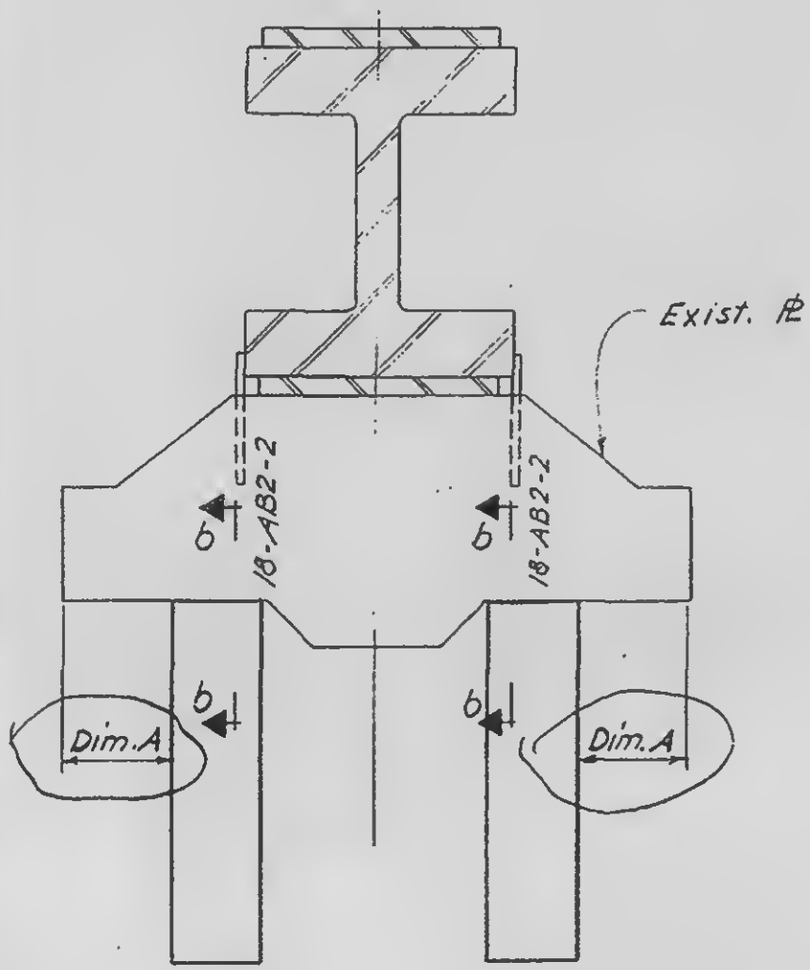
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 34 | DATE 2-7-69

REVISIONS

4-30-69

See Note 6 18-AB2-2

Detail No.	Strap	Studs	Elev.	Dim. A
34.1	6 x 1/2 x 2'-0"	2 x 4/5/8	(-3 1/4)	7 1/2"
34.2	6 x 1/2 x 2'-0"	2 x 4/5/8	(-3 1/4)	6 3/4"



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18-AB2-34

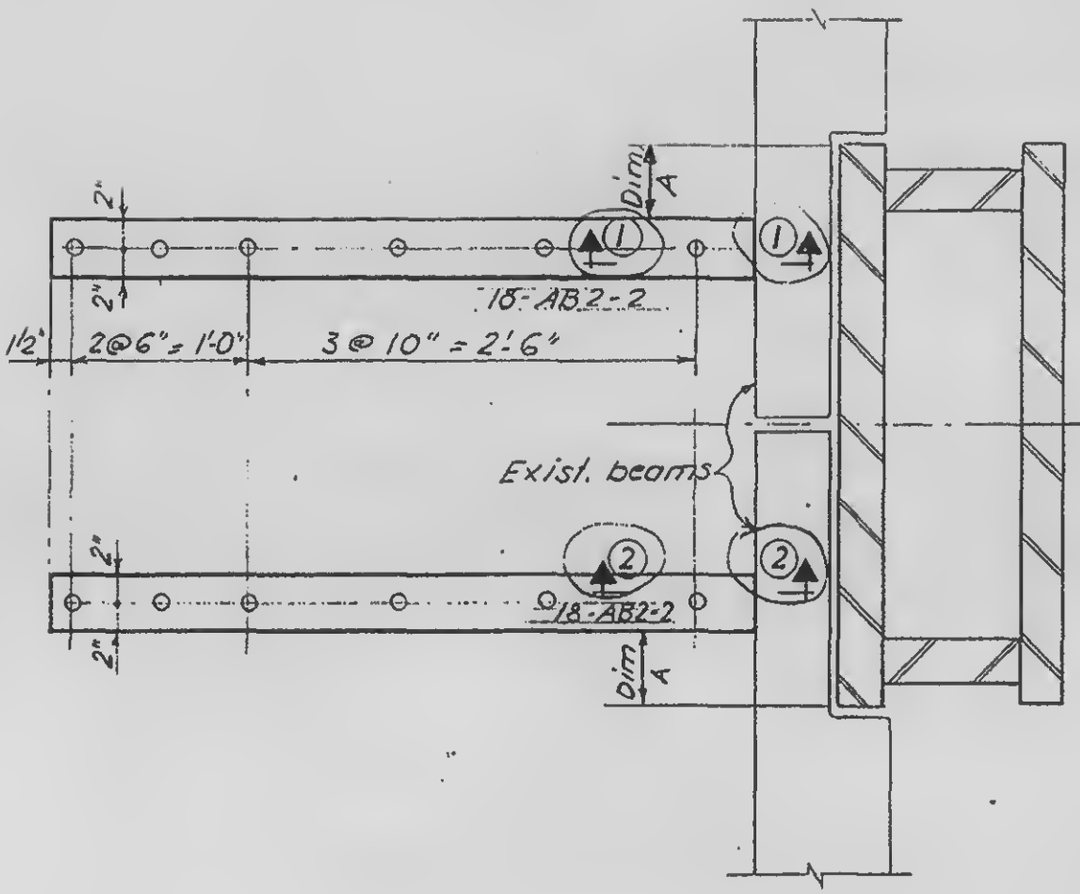
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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 35 | DATE 2-7-69

REVISIONS

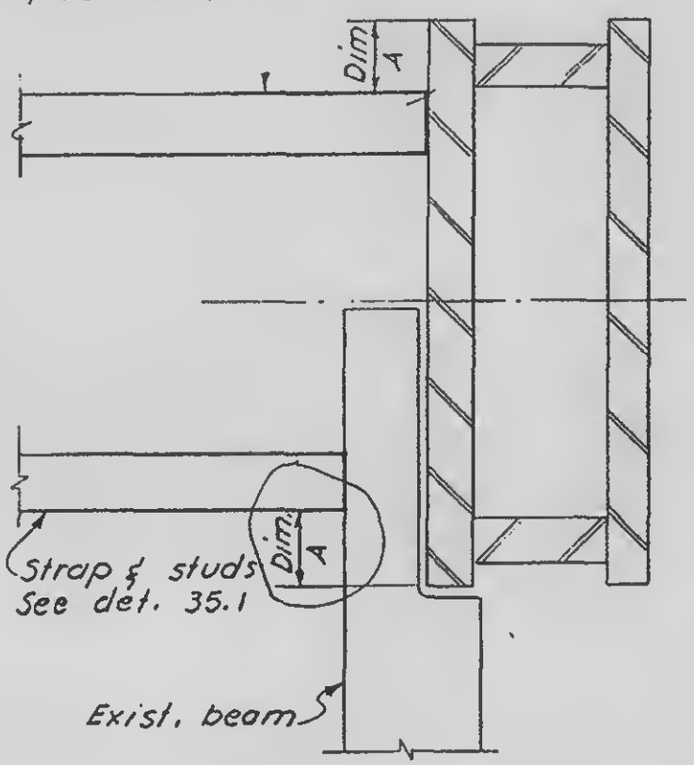
4-30-69

Detail No.	Strap	Studs	Elev.	Dim. A	Section ①	Section ②
35.1	4" × ½" × 4'-0"	⅝"	(-3½)	5"	C-C	C-C
35.2	4" × ½" × 4'-0"	⅝"	(-3½)	4½"	—	C-C
35.3	4" × ½" × 4'-0"	⅝"	(-3½)	½"	C-C	C-C
35.4	4" × ½" × 4'-0"	⅝"	(-3½)	½"	e-e	C-C



DETAIL 35.1, 35.3 & 35.4

See Key plan & detail 12.3.



DETAIL 35.2

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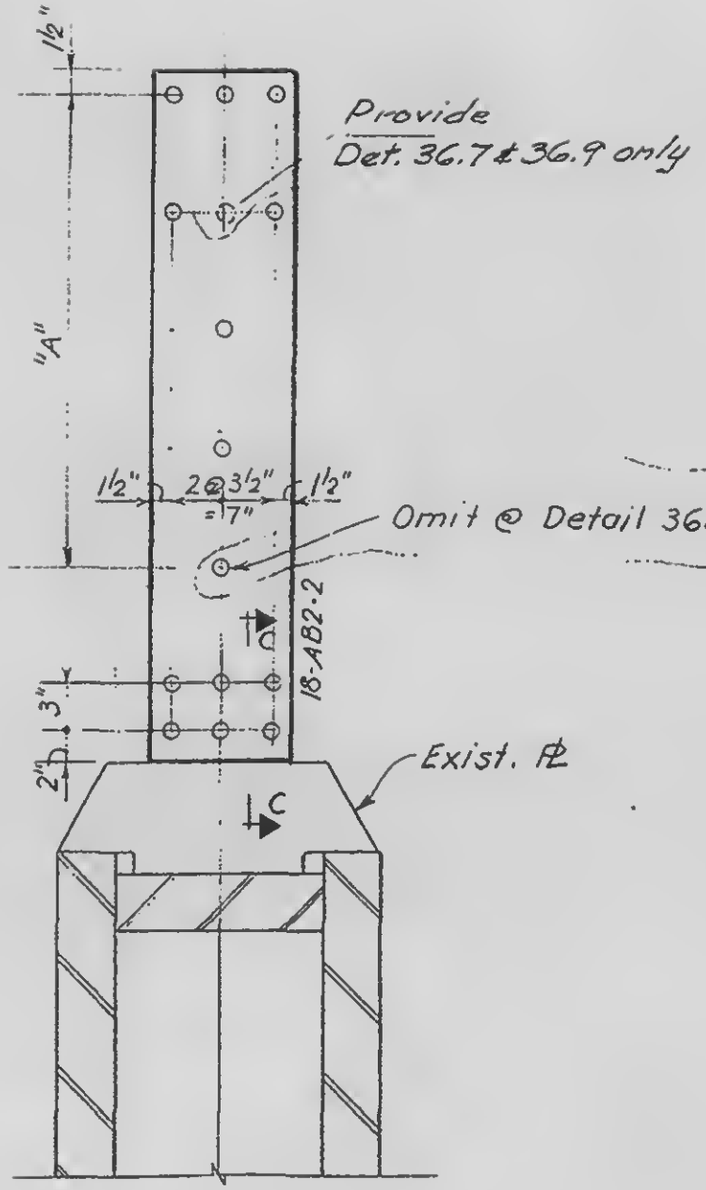
18-AB2-35

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4-30-69



Detail No.	Strap	Studs	Elev.	"A"
36.1	10" x ½" x 3'-10½"	¾"	(-3½)	4 @ 8" = 2'-8"
36.2	10" x ½" x 3'-4½"	¾"	(-3½)	4 @ 7" = 2'-4"
36.3	10" x ½" x 3'-0½"	¾"	(-3½)	4 @ 6" = 2'-0"
36.4	10" x ½" x 2'-8½"	¾"	(-3½)	4 @ 5" = 1'-8"
36.5	10" x ½" x 3'-3½"	¾"	(-3½)	4 @ 7" = 2'-4"
36.6	10" x ½" x 2'-4½"	¾"	(-3½)	4 @ 4" = 1'-4"
36.7	10" x ½" x 1'-8½"	¾"	(-3½)	3 @ 3½" = 10½"
36.8	10" x ½" x 2'-7½"	¾"	(-3½)	4 @ 4¾" = 1'-7"
36.9	10" x ½" x 1'-10½"	¾"	(-3½)	4 @ 3" = 1'-0"
36.10	10" x ½" x 2'-9½"	¾"	(-3½)	4 @ 5" = 1'-8"
36.11	10" x ½" x 3'-6½"	¾"	(-3½)	4 @ 7" = 2'-4"

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED: L O'Neill

DRAWN: F. Smith

REVIEWED: W. Brewer

18-AB2-36

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

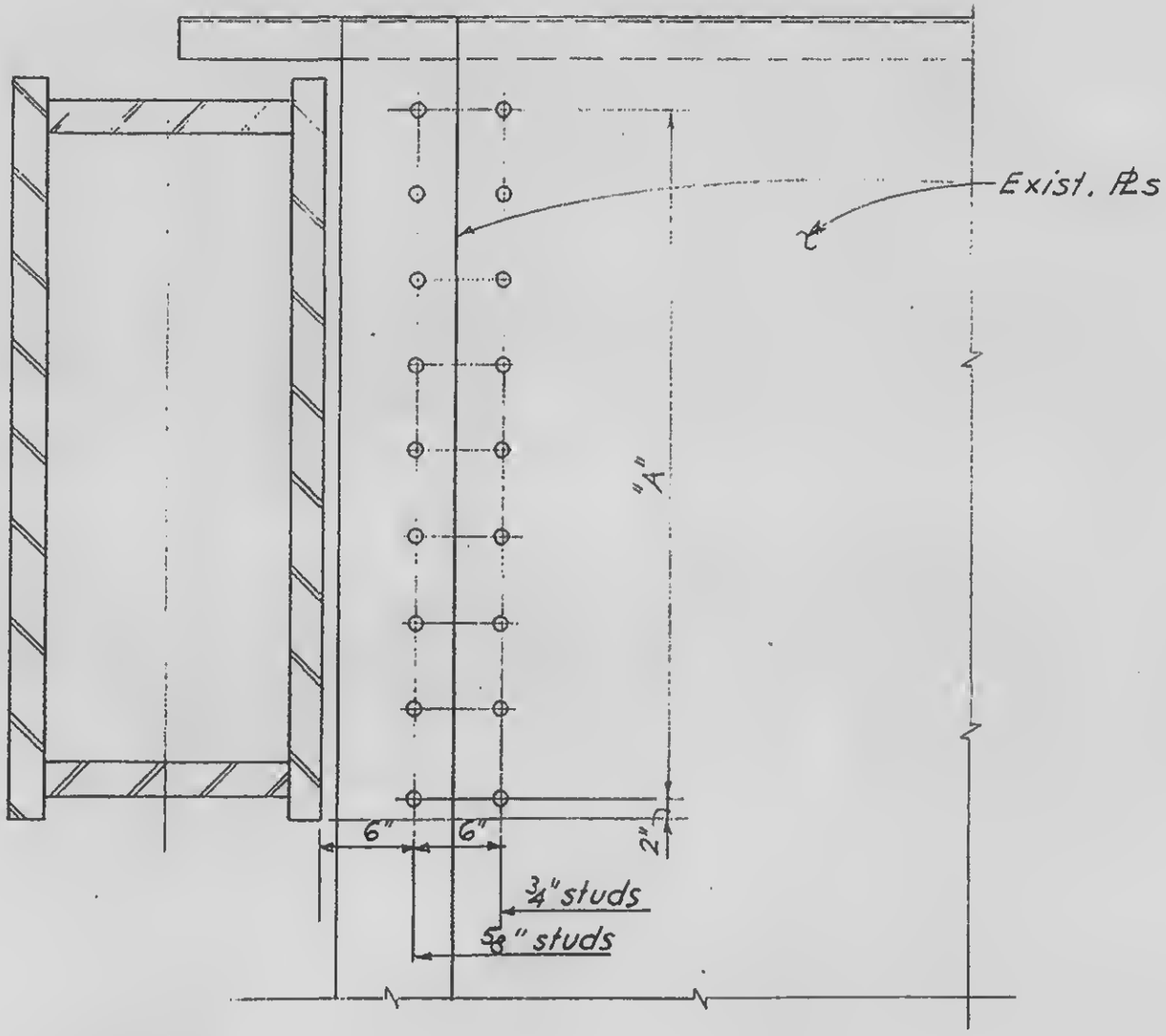
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 37 | DATE 2-7-69

REVISIONS

4-30-69

Detail No.	"A"
37 A	8@6" - 4'-0"
37 B	8@7" = 4'-8"
37 C	8@7½" - 5'-0"
37 D	8@8" = 5'-4"
37 E	8@9" = 6'-0"

Floor side



Core side

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED L. O'Neill

DRAWN F. Smith

REVIEWED W Brewer

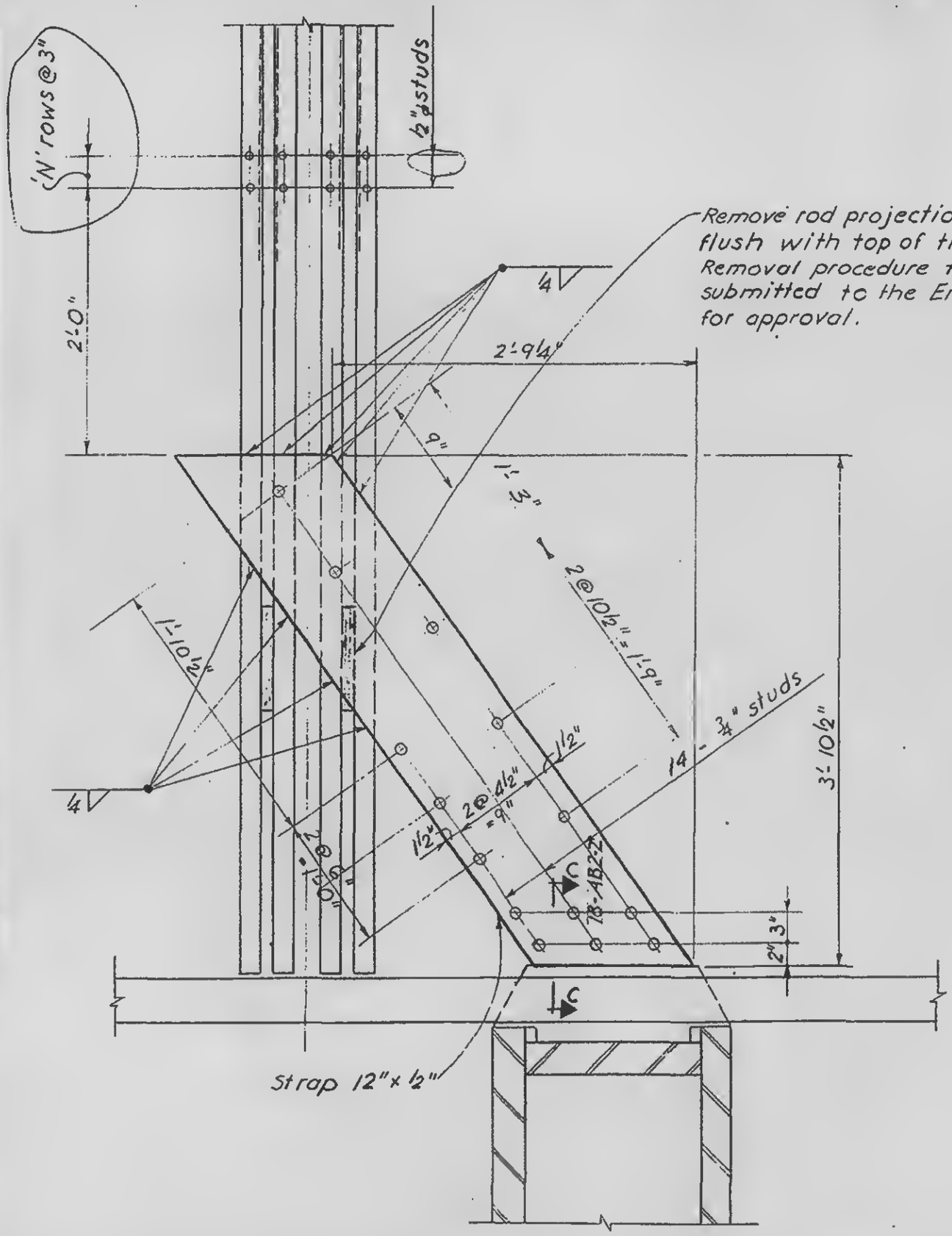
18-AB2-37

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON . Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR - CORE - DETAIL 38 | DATE 2-7-69

REVISIONS

4-30-69



Detail No	N
38.1	2
38.2	1

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No. 34360
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DESIGNED J. O'Neill

DRAWN F. Smith

REVIEWED W. Brewer

18-AB2-38

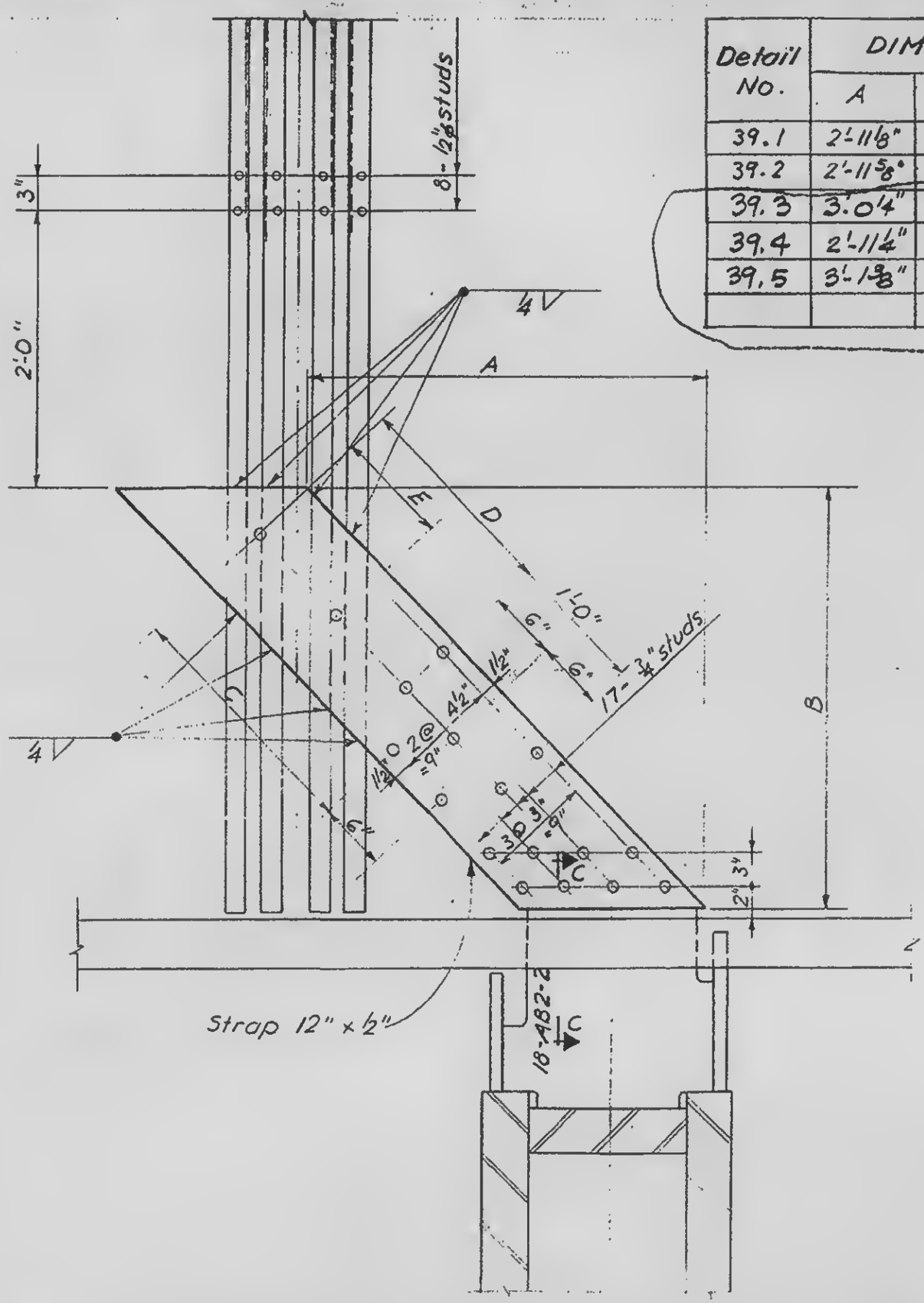
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER — TITLE: BASE ANCHOR - CORE - DETAILS — DATE: 2-17-69

REVISIONS

4/30/69

Detail No.	DIMENSION SCHEDULE				
	A	B	C	D	E
39.1	2'-11⅛"	3'-4½"	1'-9"	1'-6"	1'-0"
39.2	2'-11⅝"	3'-0½"	1'-6"	1'-3"	10"
39.3	3.0'4"	2'-7½"	1'-4"	1'-2"	9"
39.4	2'-11¼"	3'-3½"	1'-8"	1'-5"	1'-0"
39.5	3'-1⅜"	1'-10½"	1'-0"	0'-10"	7"



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DESIGNED: J. Neill

DRAWN: Y. Smith

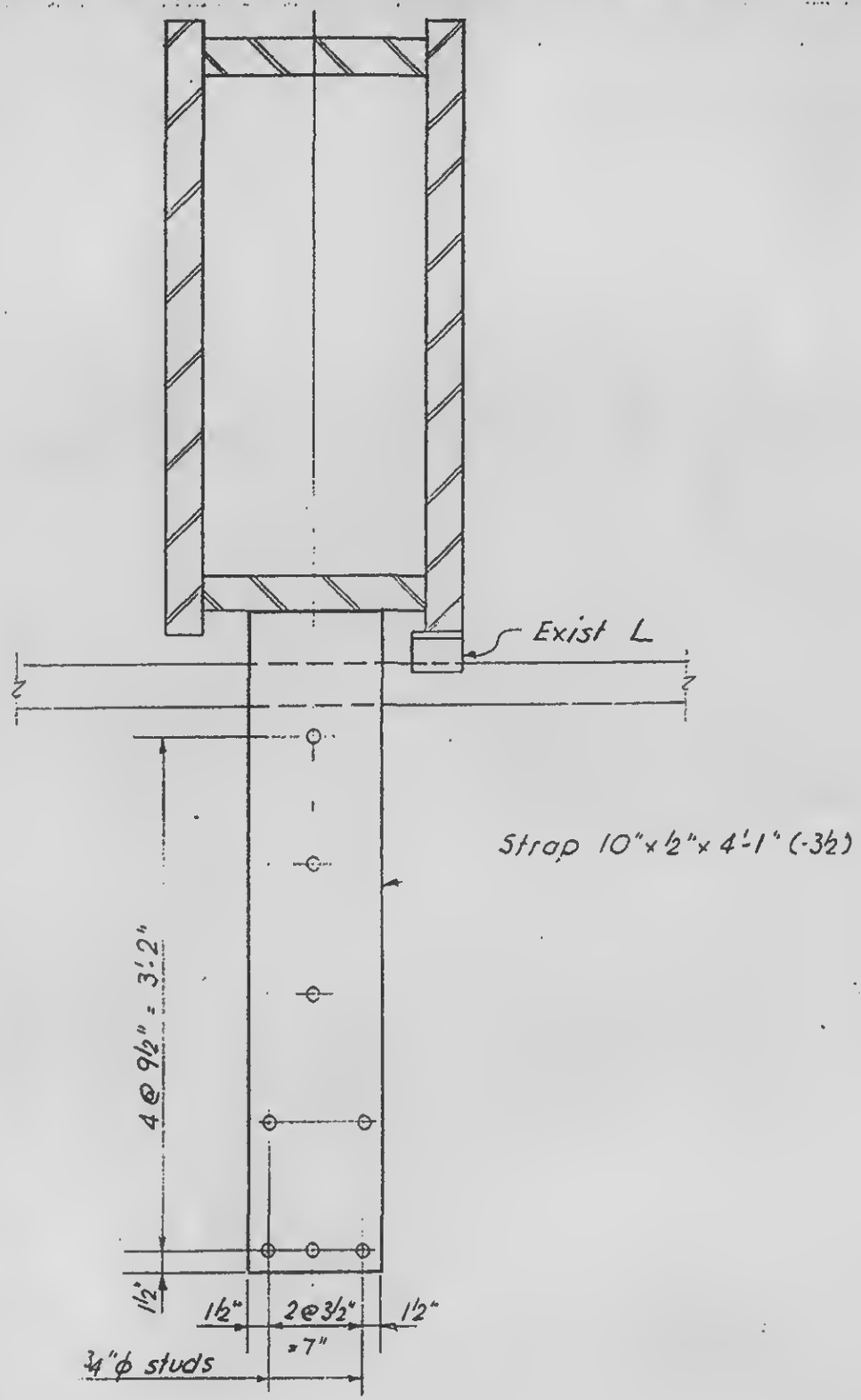
REVIEWED: W. Brewer

18-AB2-39

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 40 | DATE: 4/30/69

REVISIONS



Strap 10" x ½" x 4'-1" (-3½)

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LESLIE E. ROBERTSON
No. 34506
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED

DRAWN: F. Smith

REVIEWED: W. Brewer

18-AB2-40

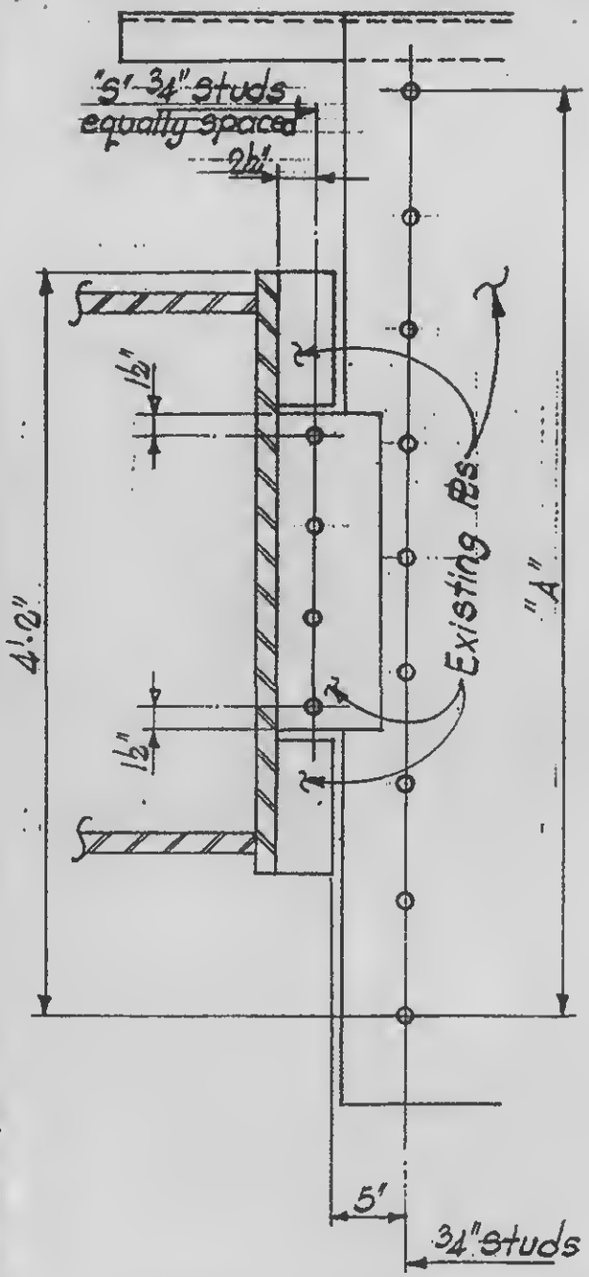
STERLING HEILE CHRISTIANSEN ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CORPORATION

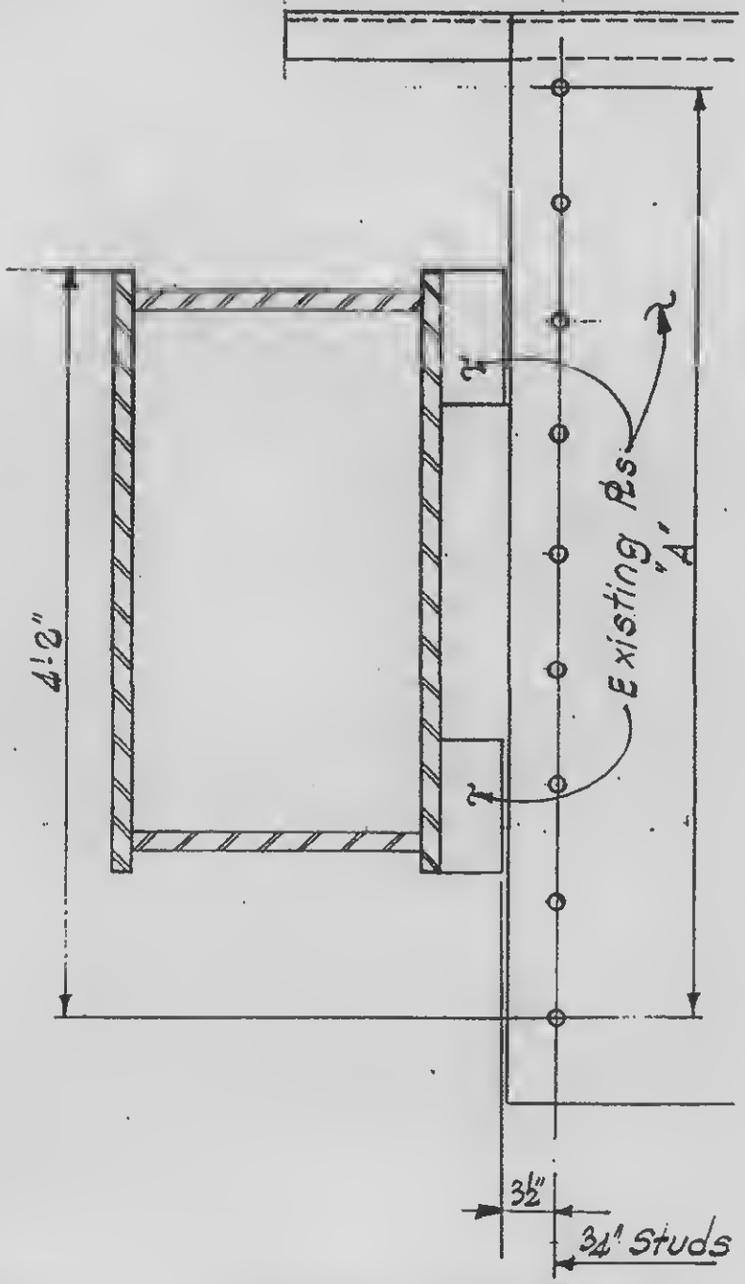
TITLE SCRAP ANCHOR & CORE DETAIL 41A THRU 41G

JOB NO. 6610

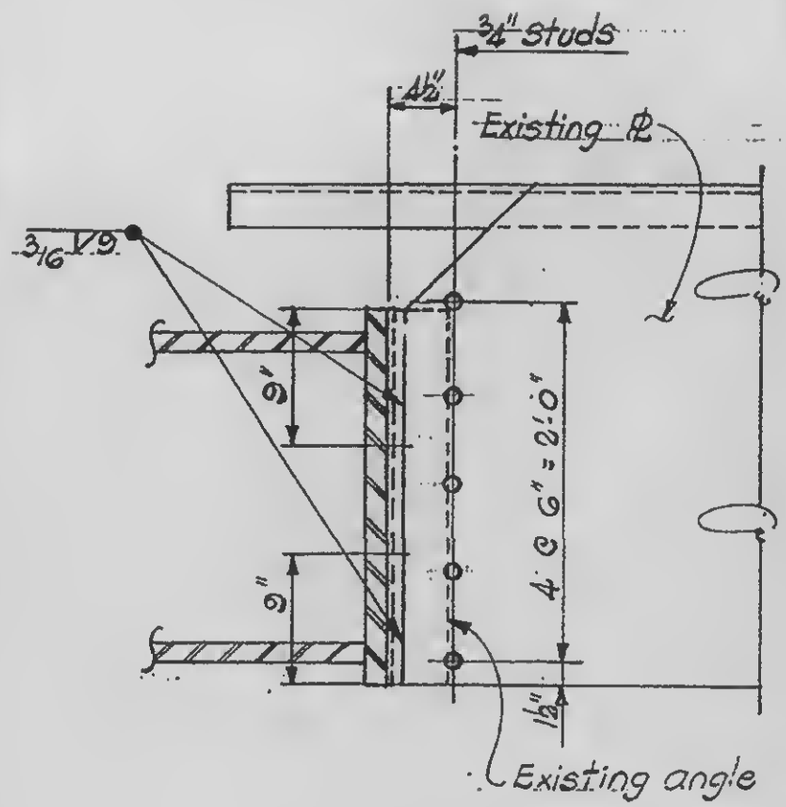
REVISIONS



DETAIL 41A THRU 41D



DETAIL 41E & 41F



DETAIL 41G

DETAIL No.	"A"	"S"
41A	8 @ 6" = 4'-0"	4
41B	8 @ 7" = 4'-8"	3
41C	8 @ 8½" = 5'-8"	3
41D	8 @ 9½" = 6'-4"	3
41E	8 @ 9½" = 6'-4"	—
41F	8 @ 7½" = 5'-0"	—

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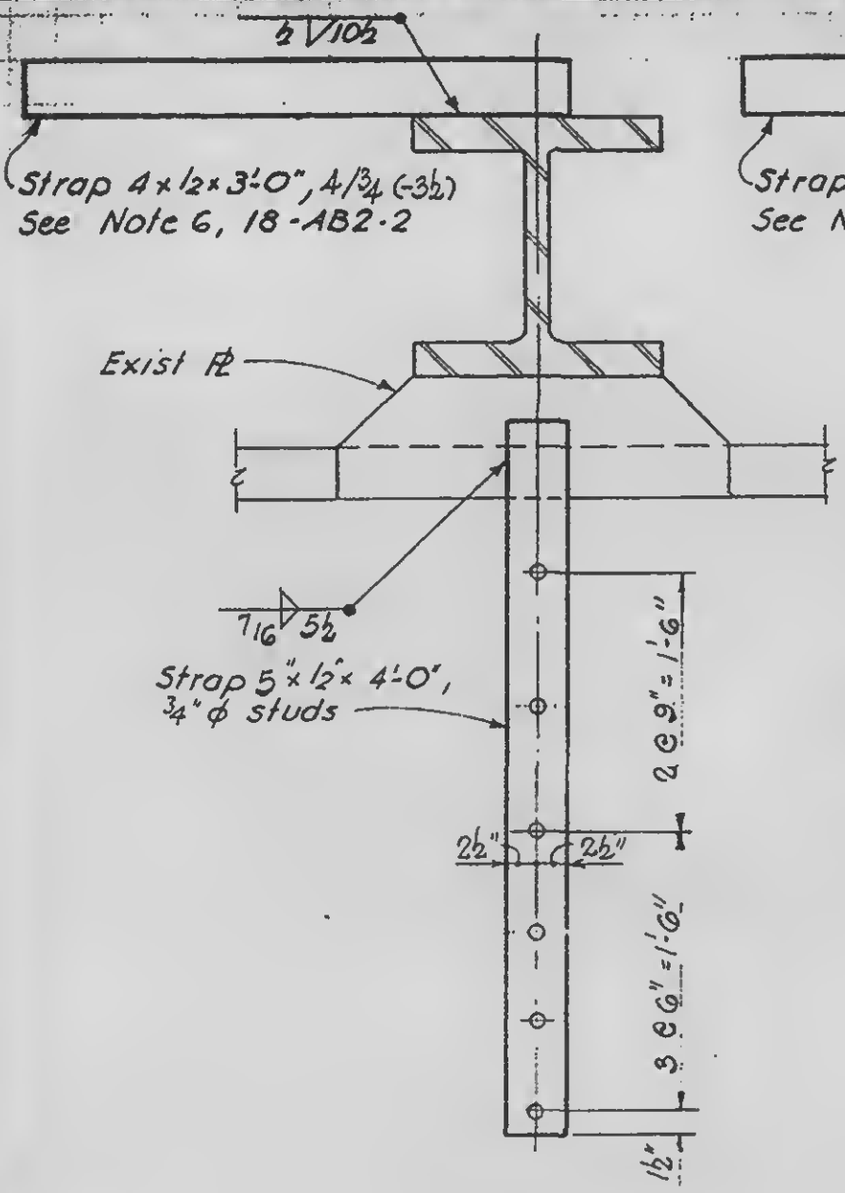
DESIGNED

DRAWN S.T.M.

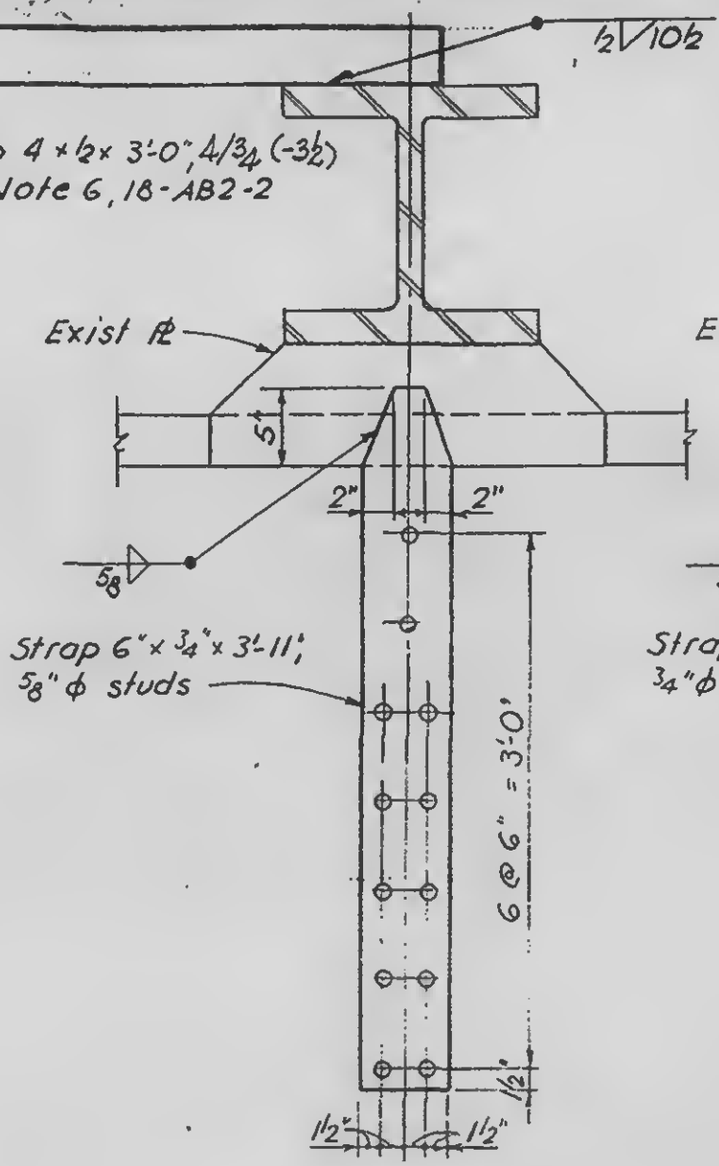
REVIEWED W. Brewer

18-AB2-41

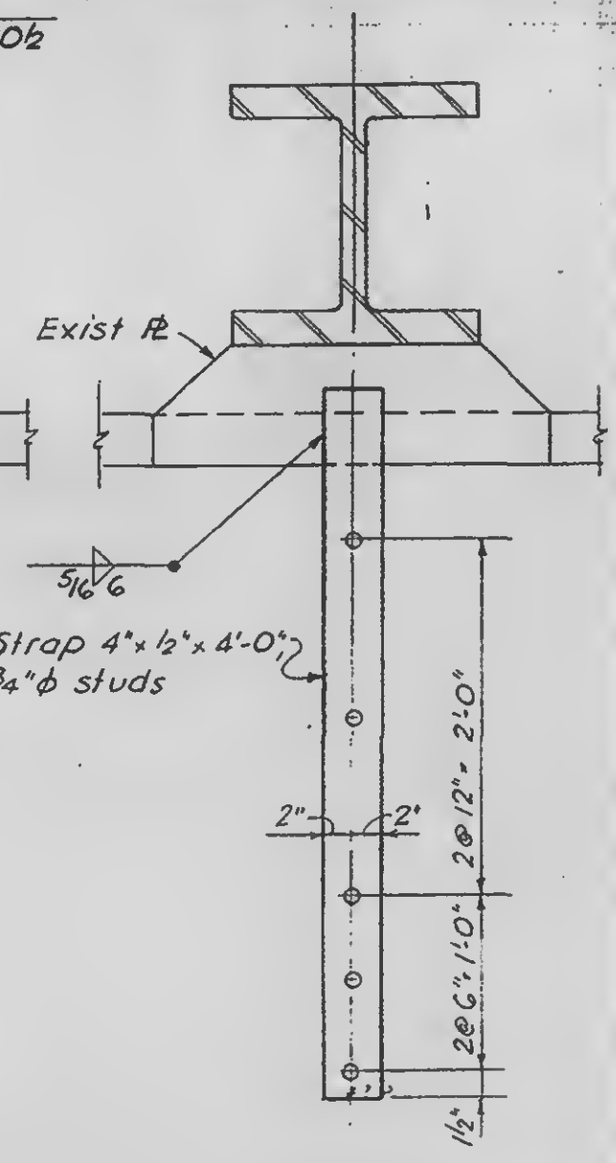
REVISIONS



DETAIL 42.1



DETAIL 42.2



DETAIL 42.3

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

LY
DESIGNED

DRAWN
F. Smith

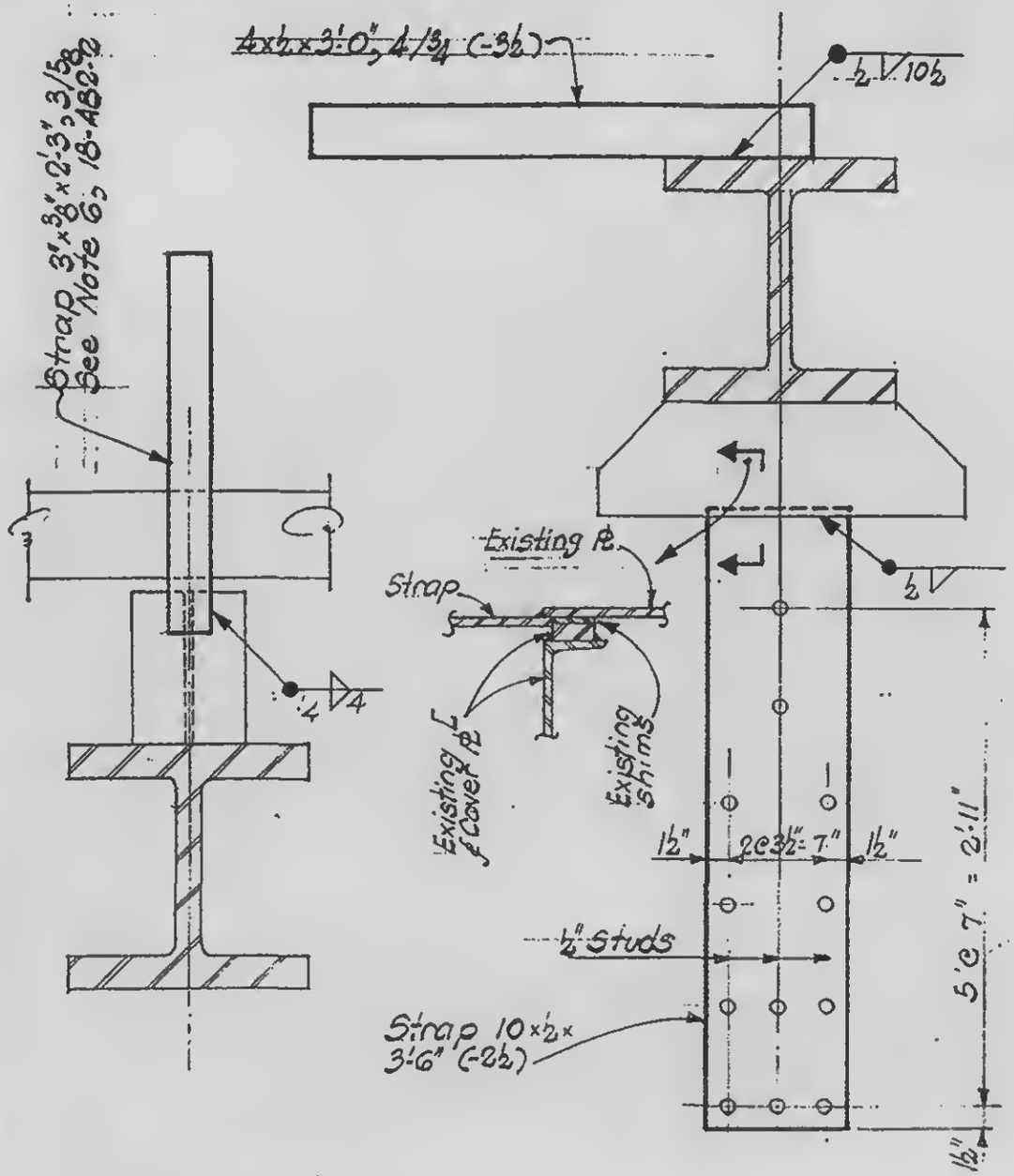
REVIEWED
W. Brewer

18-AB2-42.1

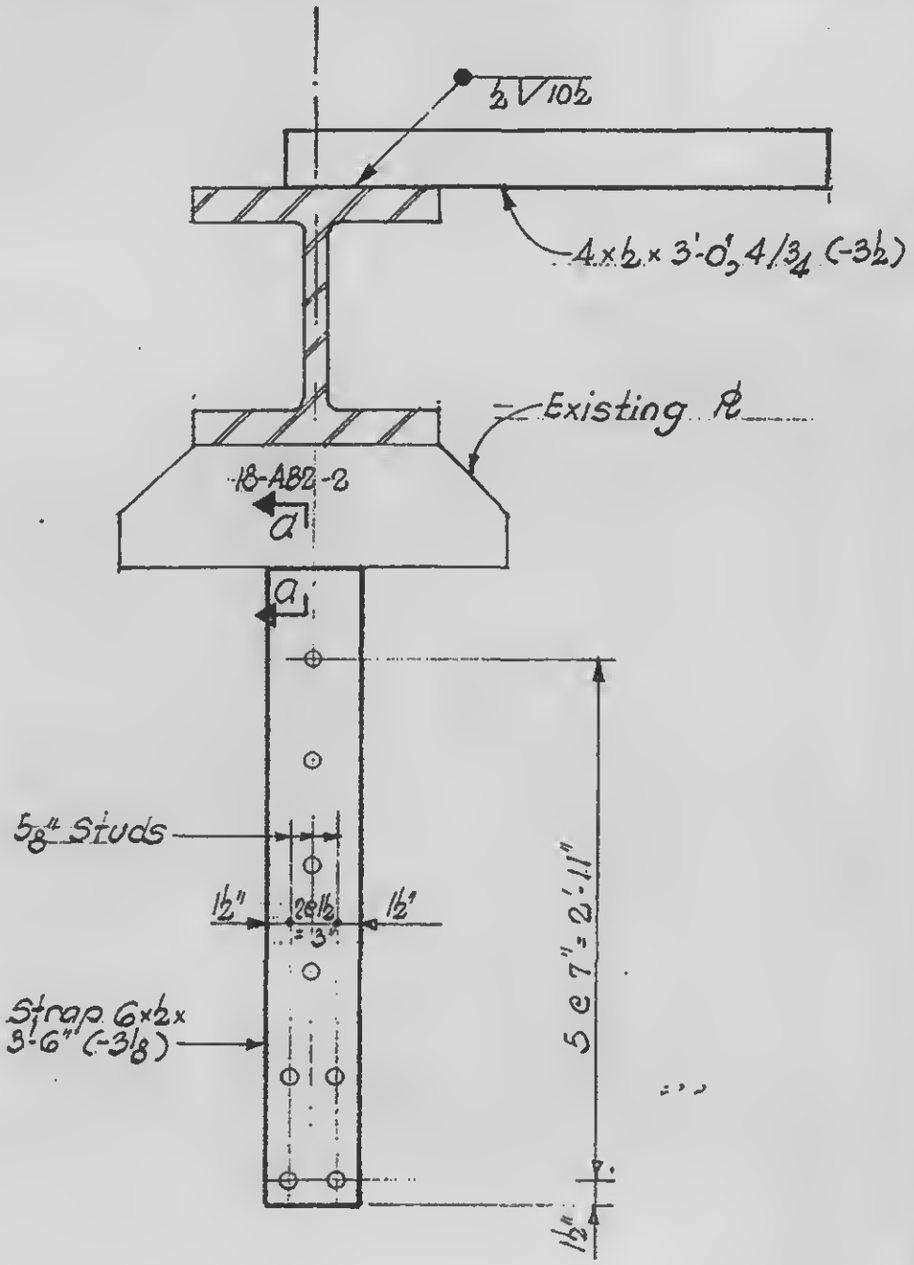
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: 1WTC WORLD TRADE CENTER | TITLE: STRAP ANCHOR CORE DETAIL 42 | DATE: 4/30/69

REVISIONS



DETAIL 42.4



DETAIL 42.5

DETAIL 42.6

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DRAWN S.T.M.

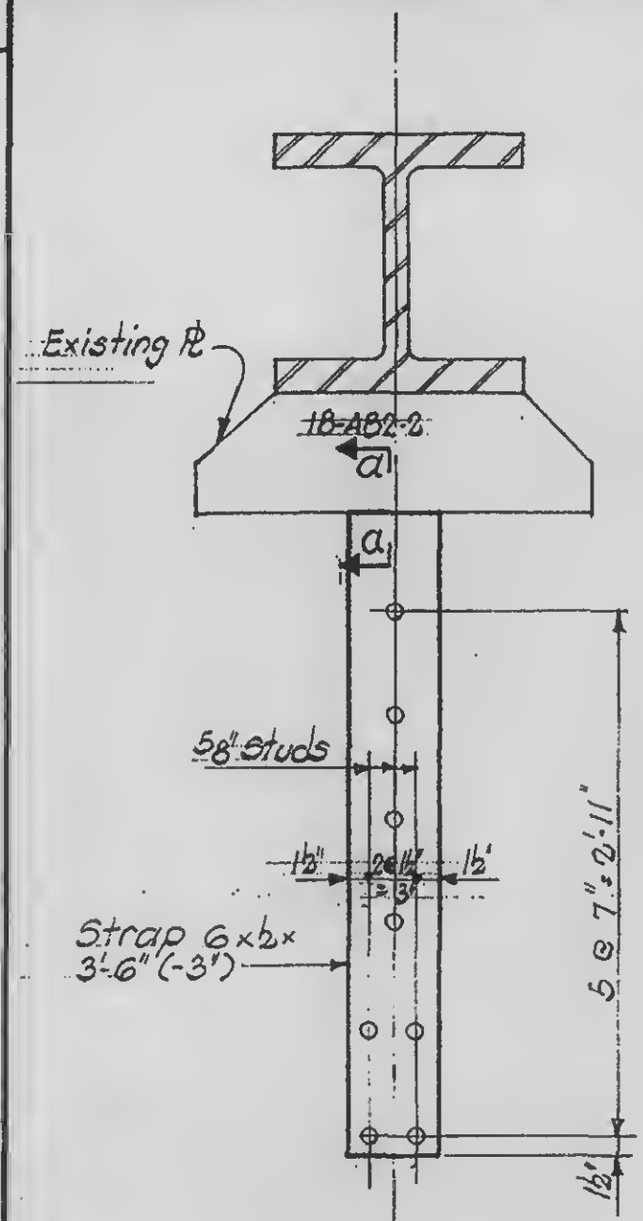
REVIEWED W. Brewer

18-AB2-42.2

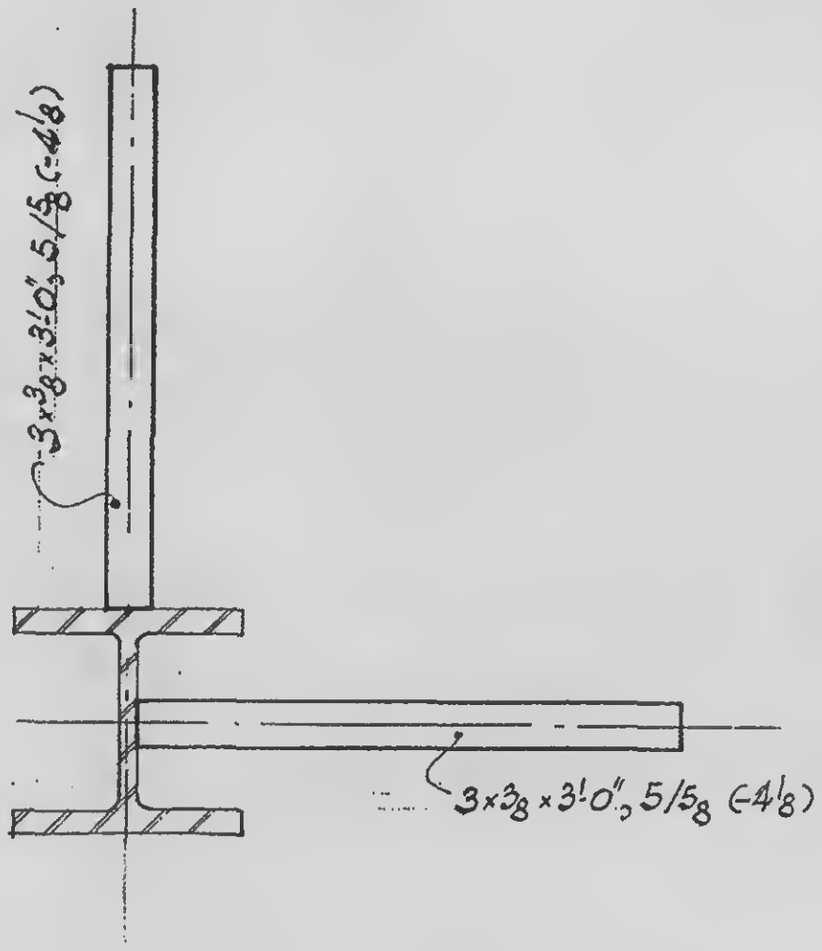
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR DETAIL 42 | DATE 4/30/69

REVISIONS



DETAIL 42.7



DETAIL 42.8

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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

24

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DRAWN S.T.M.

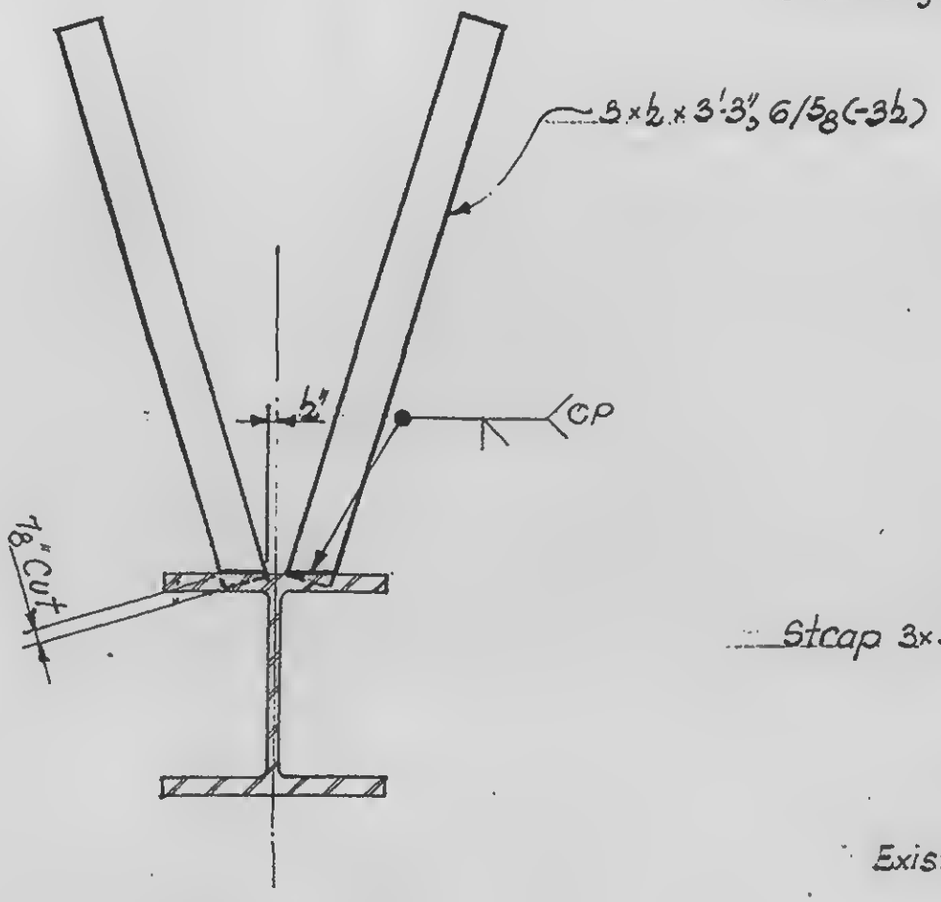
REVIEWED W. Brewer

18-A82-42.3

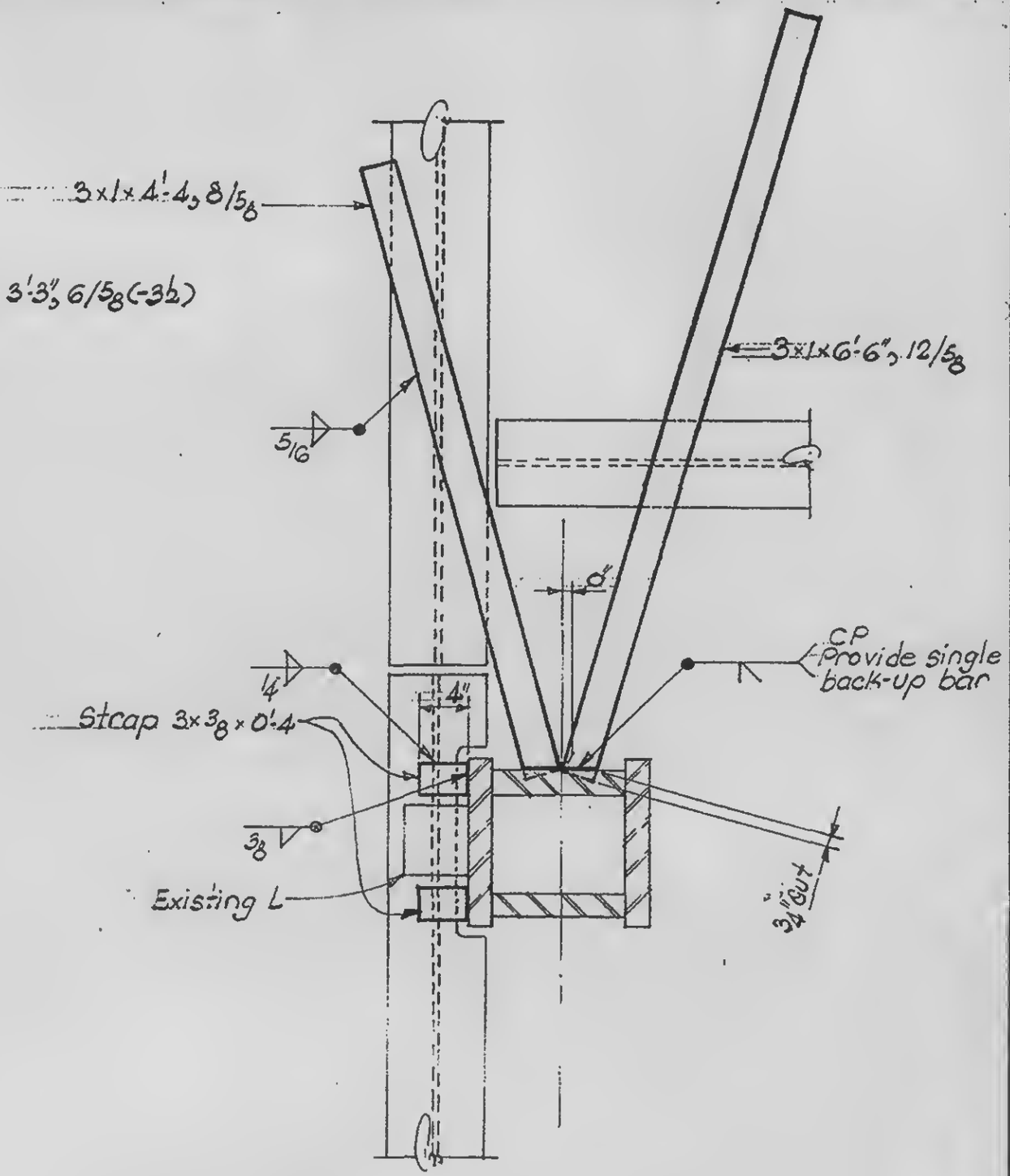
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR DETAIL #3 | DATE 4/30/69

REVISIONS



DETAIL 43.1



DETAIL 43.2

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65
DESIGNED

DRAWN
S.T.M.

REVIEWED
W. Brewer

18-A82-43

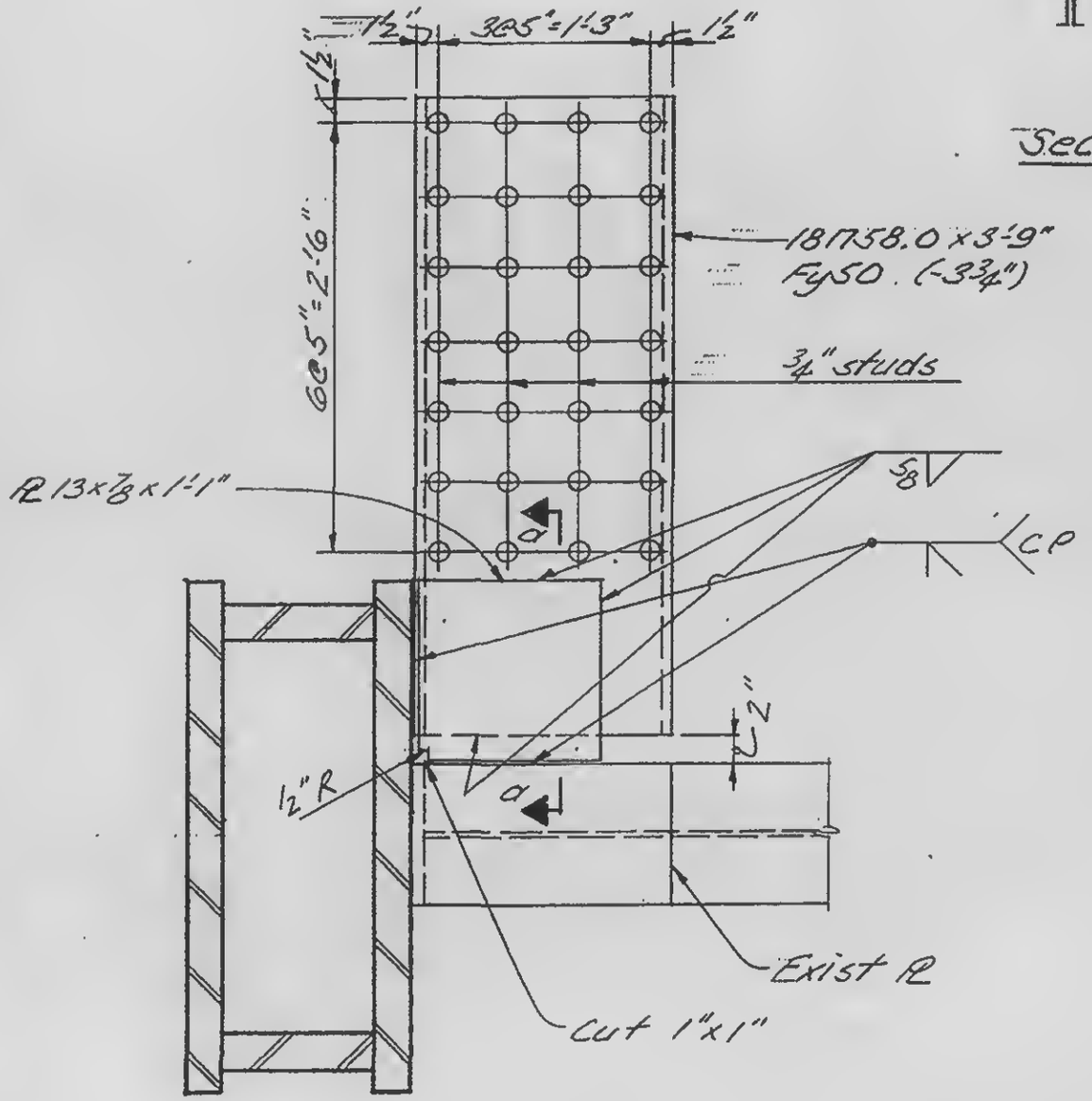
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: [illegible] | TITLE: STRAP ANCHOR - CORE - DETAIL 44 | DATE: 3/20/85

REVISIONS



Section a-a



PLAN

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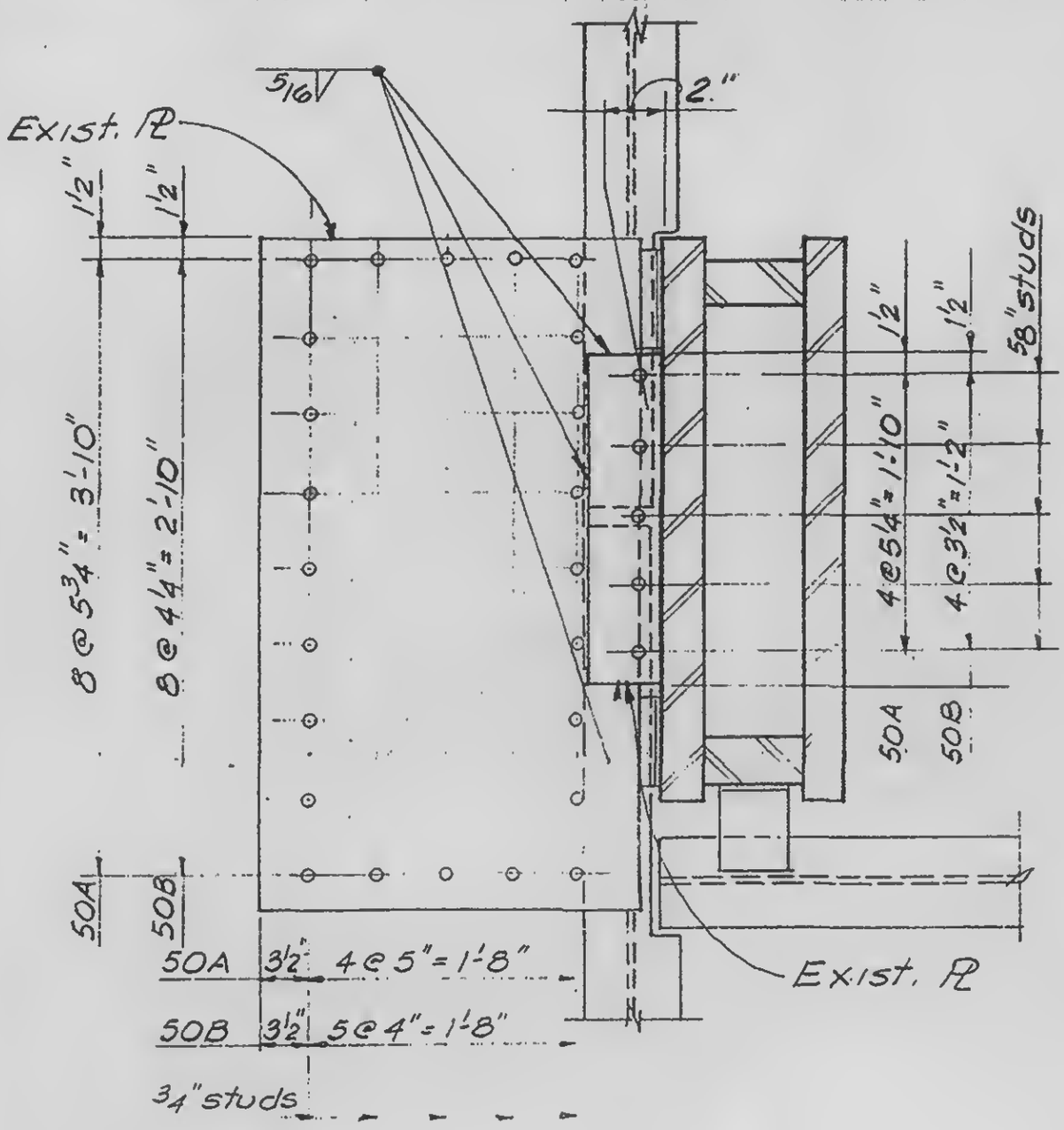
DESIGNED: [illegible]
DRAWN: J Adams
REVIEWED: W. Brewer

18-ABZ-44

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 50- | DATE 10/16/68

REVISIONS



DETAILS 50A, 50B

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DESIGNED J. O'Neill

DRAWN S. Wexler

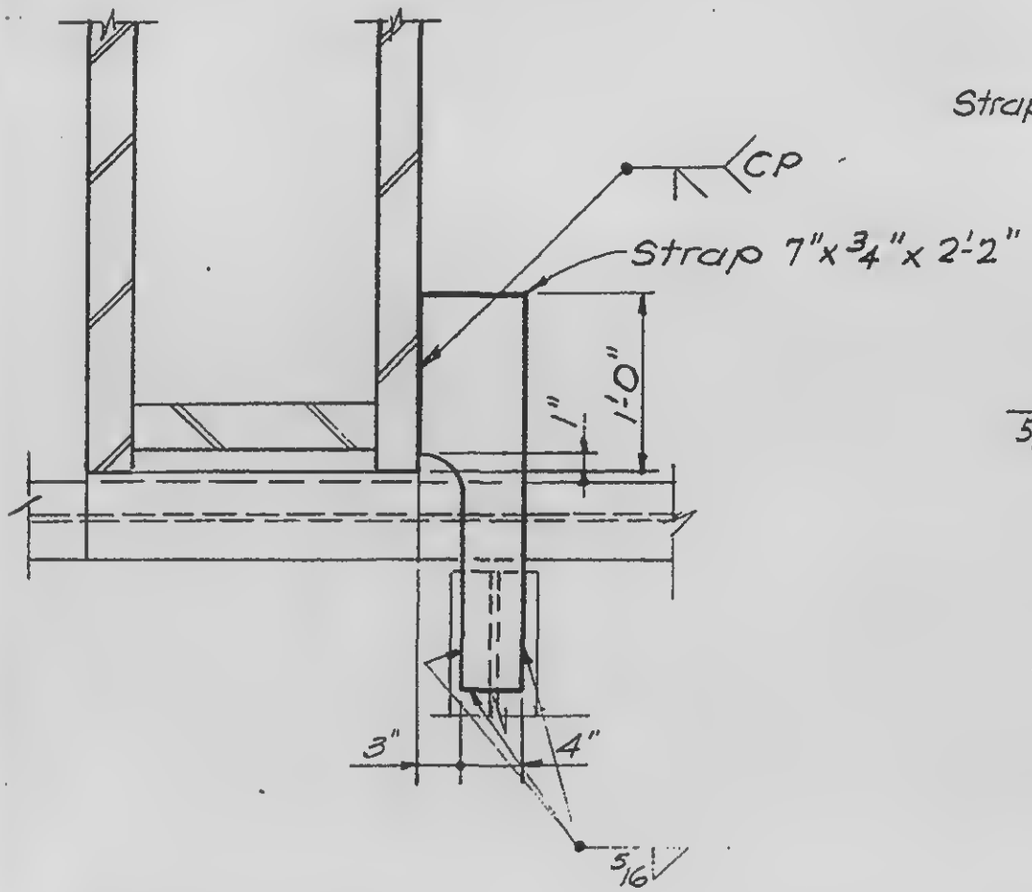
REVIEWED W. Brewer

18-AB2-50.1

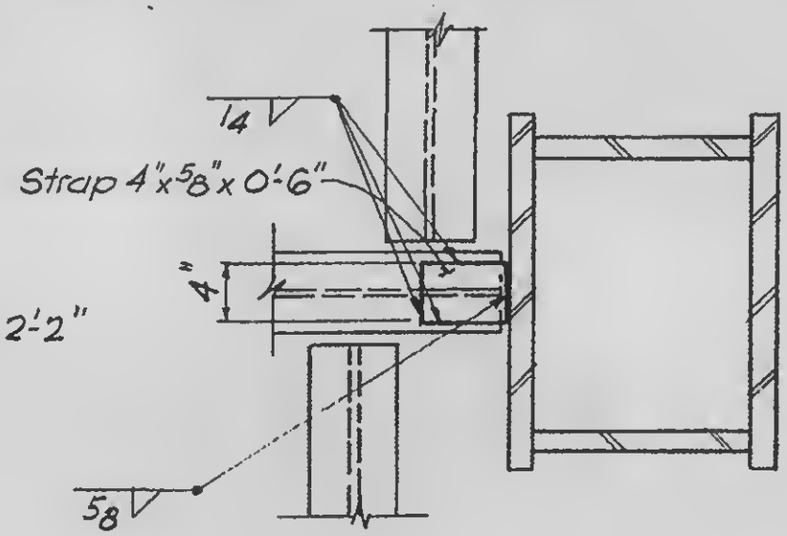
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 50 | DATE: 10/16/68

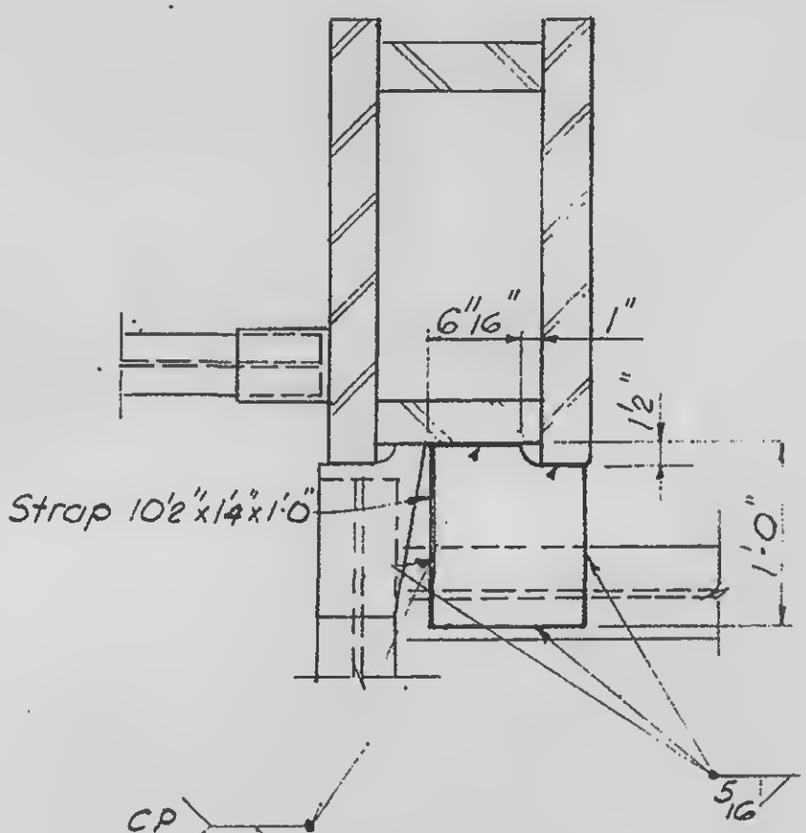
REVISIONS



DETAIL 50C



DETAIL 50D



DETAIL 50E

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED O'Neil
DRAWN S. Wexler
REVIEWED W Brewer

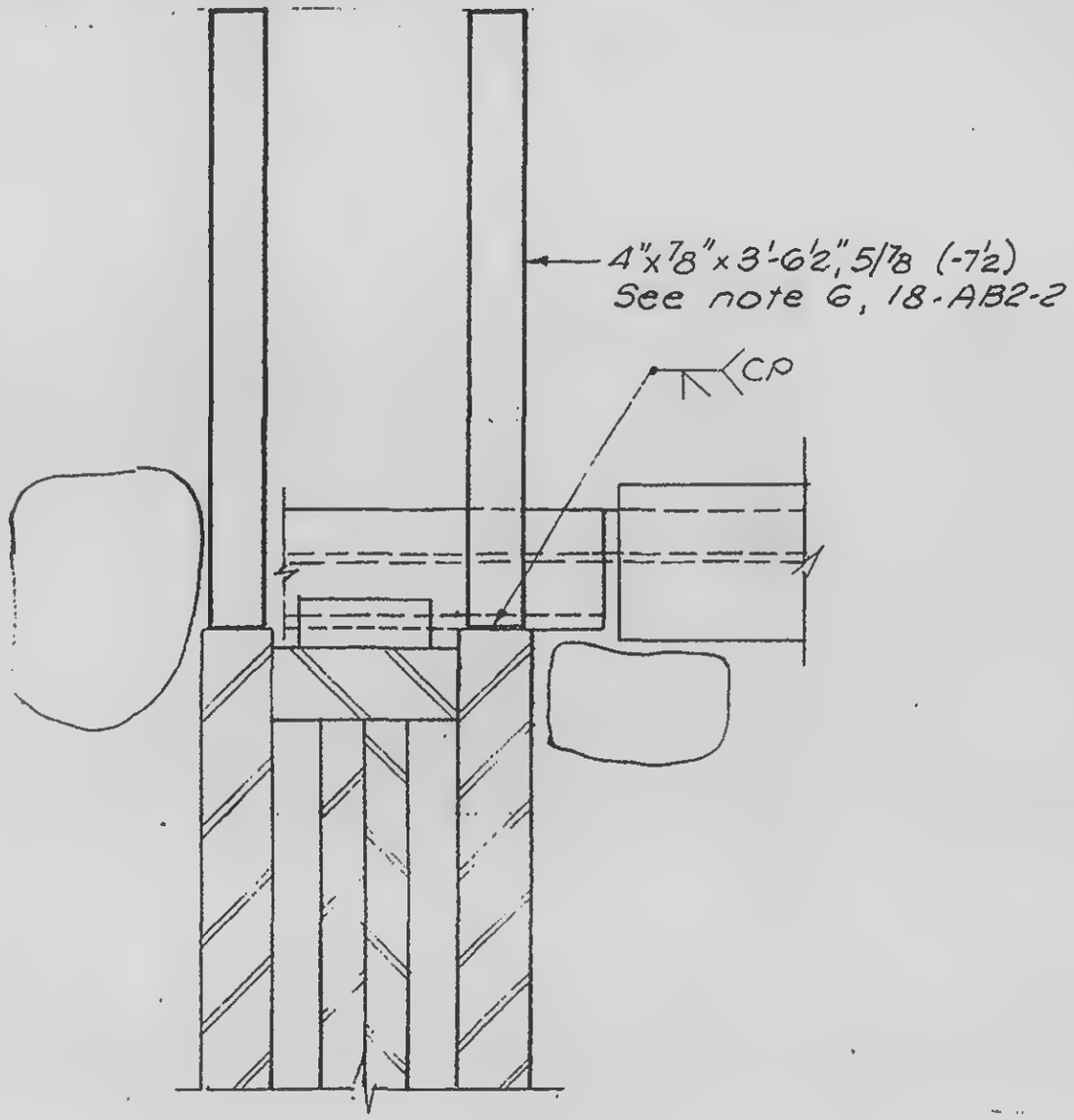
18-AB2-50.2

SKILLING HELLE CHRISTIANSEN ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 51 | DATE: 10/30/68

REVISIONS

2-7-69



DETAIL 51A

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34960
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED: H O'Neill
DRAWN: S Wexler
REVIEWED: W. Brewer

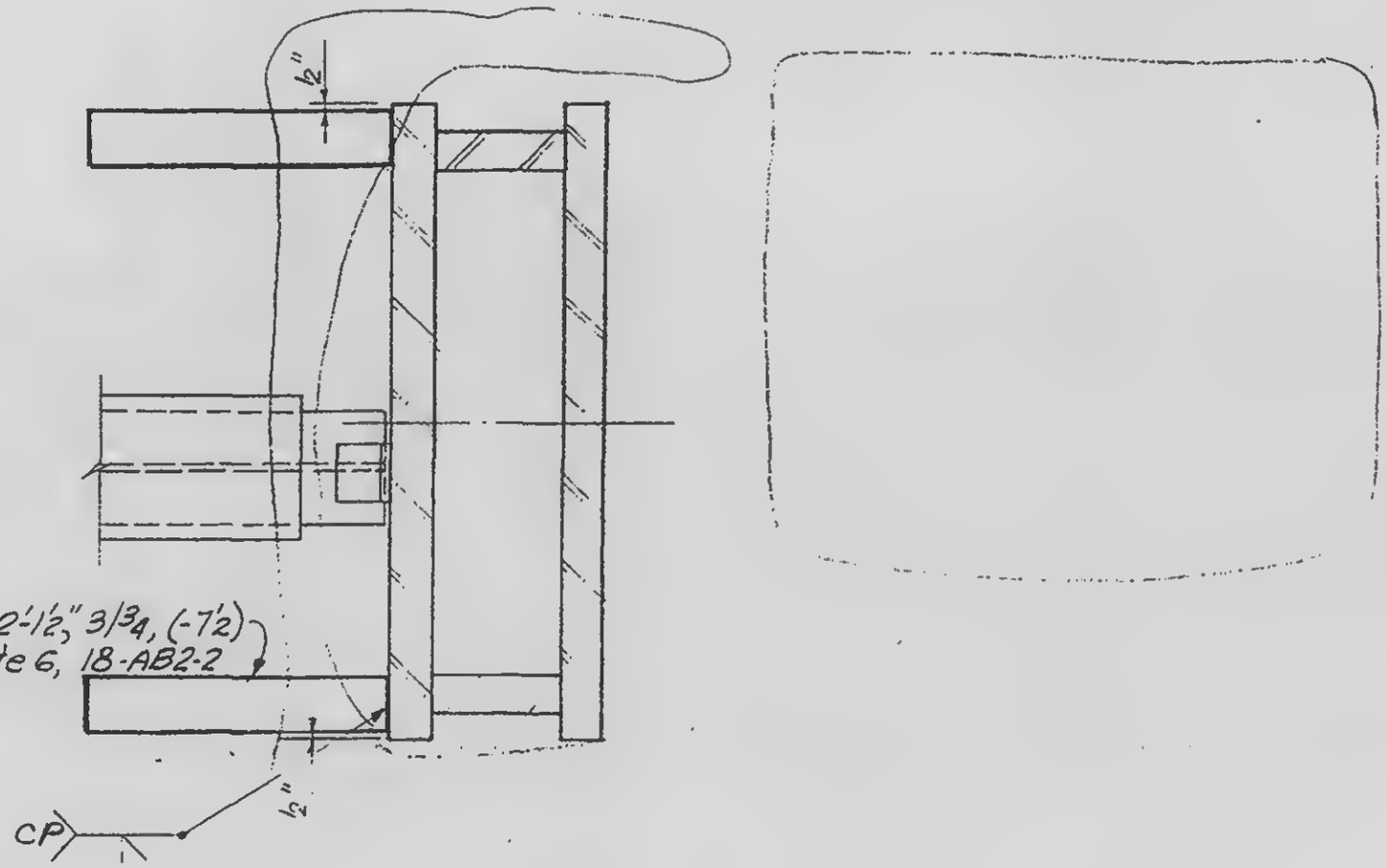
18-AB2-51.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 51 | DATE 10/30/68

REVISIONS

2-7-69



DETAIL 51 B

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

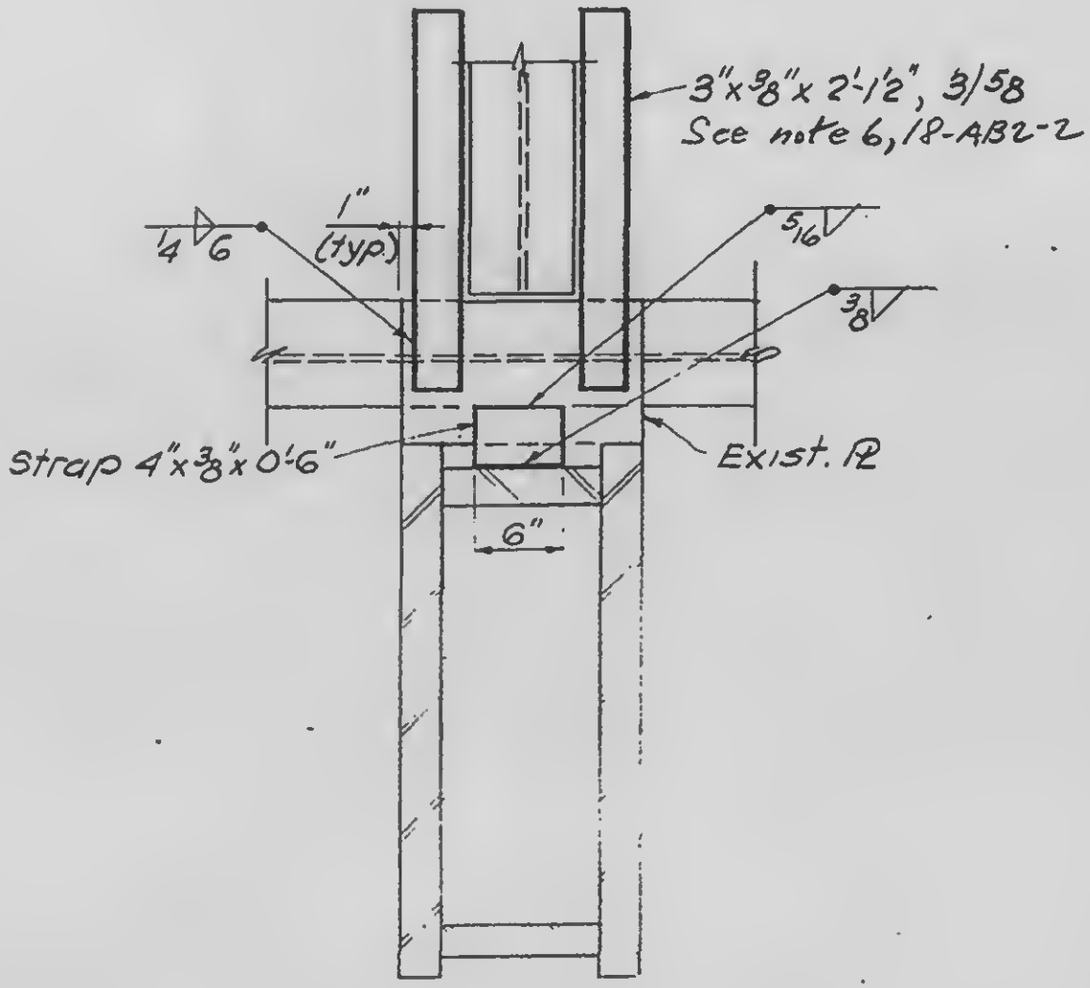
DESIGNED O'Neill
DRAWN S. Wexler
REVIEWED W. Brewer

18-AB2-51.2

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR STRAPS - CORE - DETAIL 52 | DATE: 10/30/68

REVISIONS

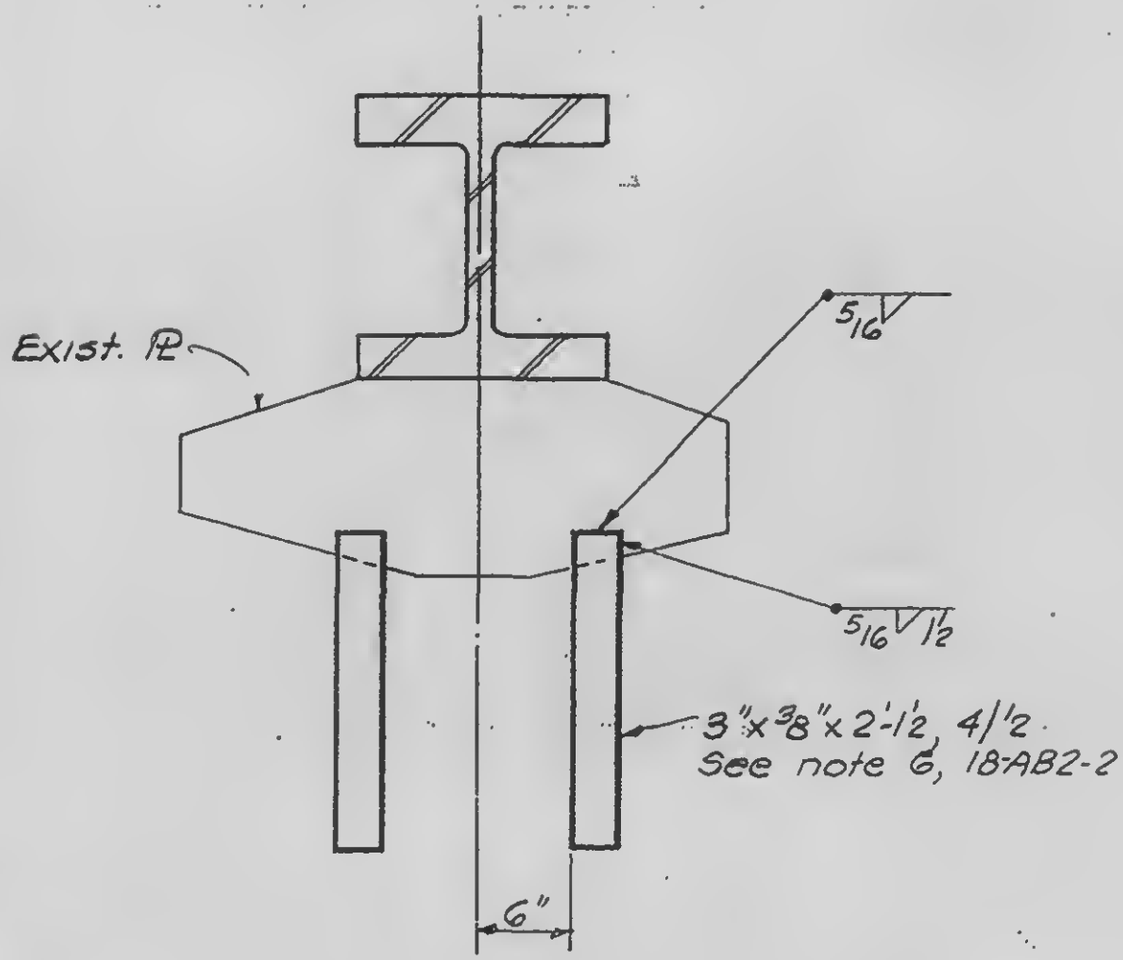


LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED: J'Neill
DRAWN: S. Wexler
REVIEWED:

18-AB2-52

REVISIONS



LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 24290 — UNIVERSITY OF THE STATE OF NEW YORK

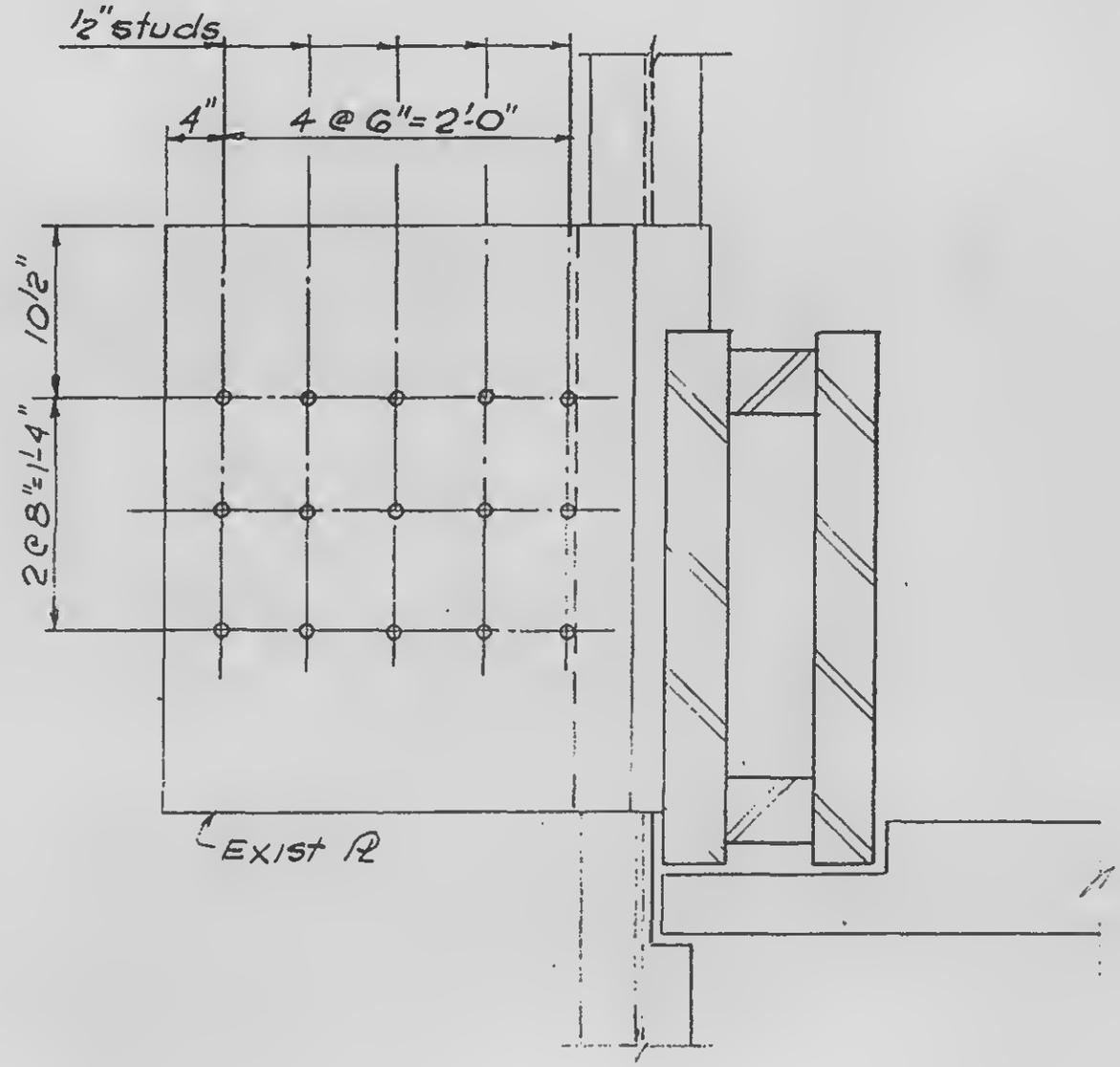
DESIGNED: L. Robertson
DRAWN: S Wexler
REVIEWED:

18-AB2-53

SKILLING, HELLE CHRISTIANSEN ROBERTSON Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 54 | DATE 12-13-68

REVISIONS



DETAIL 54A

SIGNED
d O'Neill
DRAWN
S. Wexler
REVIEWED

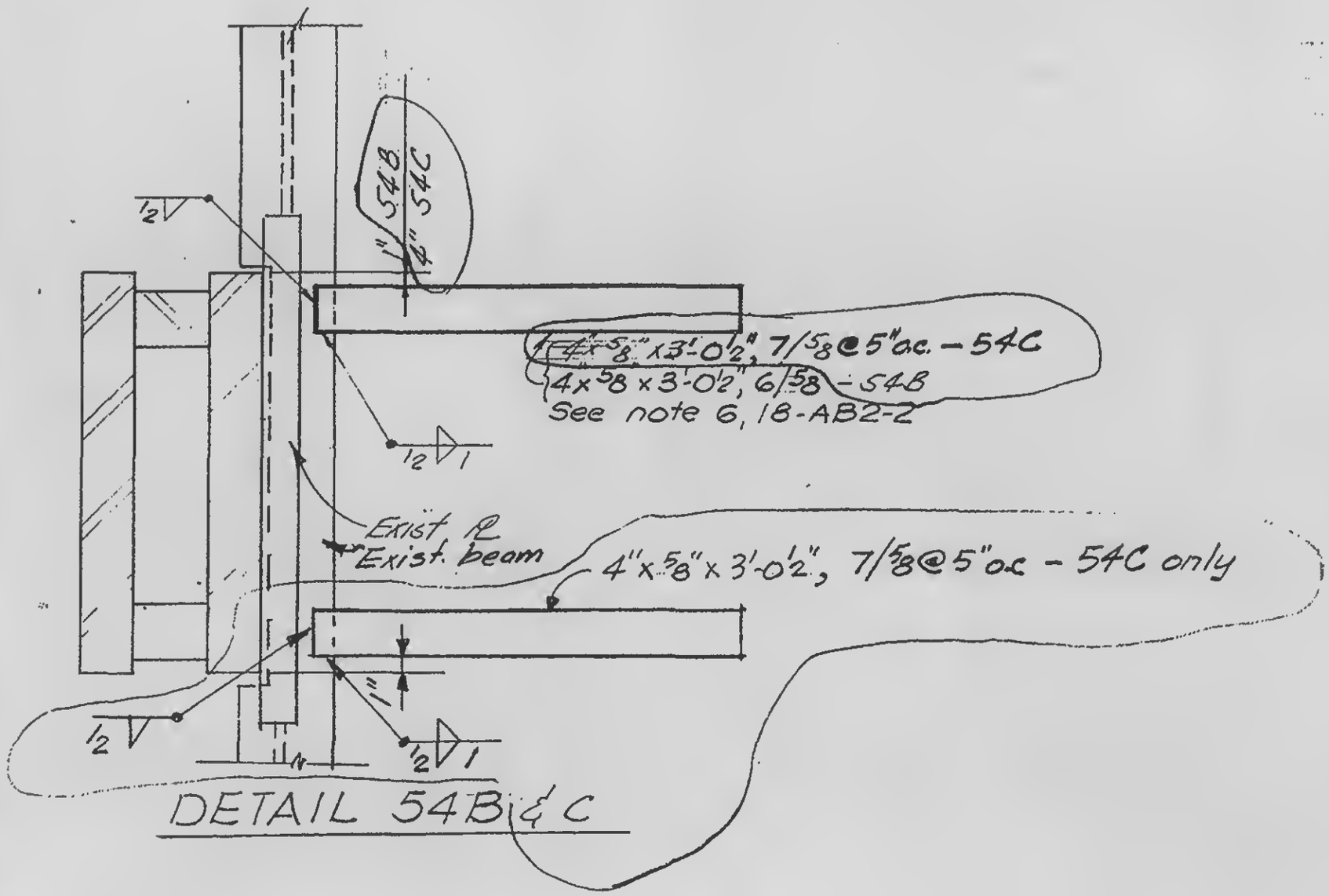
18-AB2-54L

SKILLING HELLE CHRISTIANSEN ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 54 | DATE 12-13-68

REVISIONS

20-69



DETAIL 54B & C

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED L. J'Niel

DRAWN S. Wexler

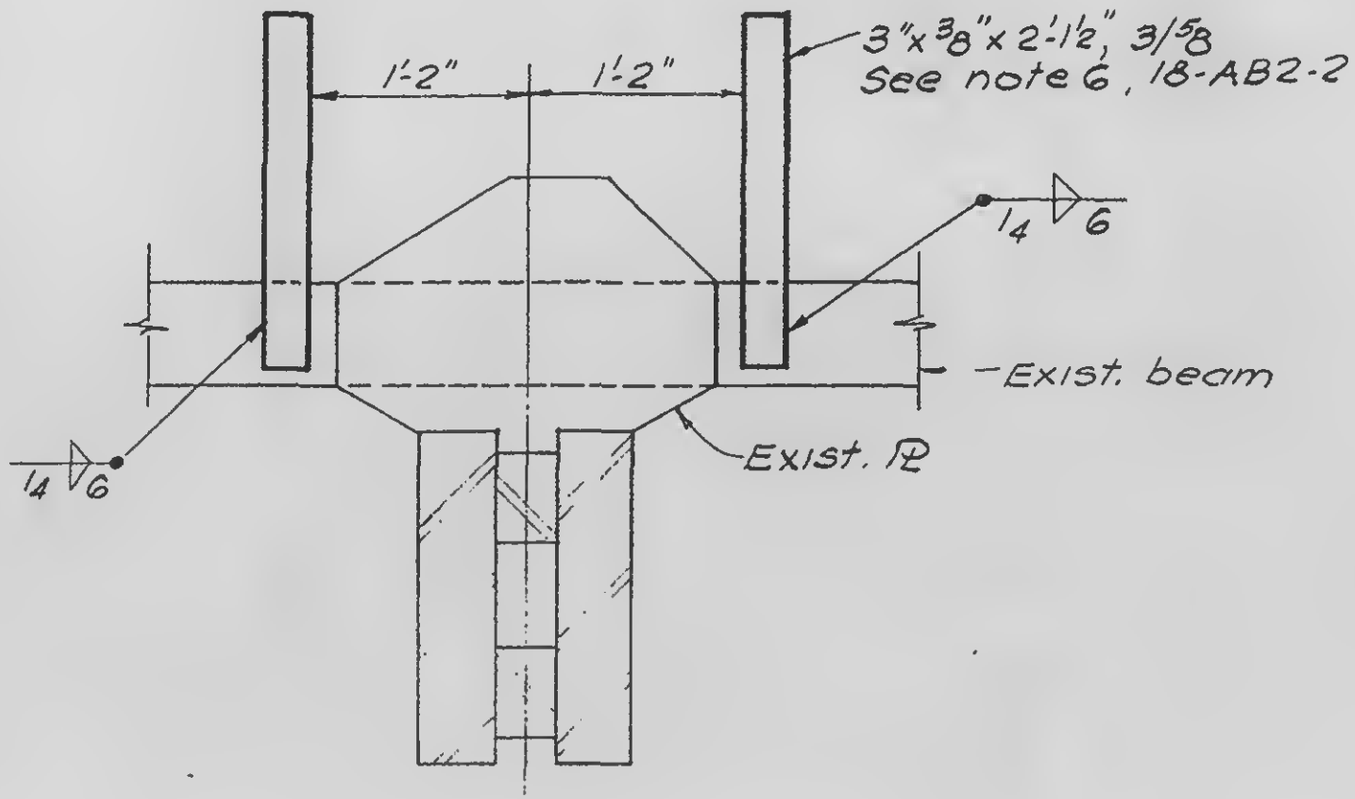
REVIEWED W. Brewer

18-AB2-54.2

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 55 | DATE 12-13-68

REVISIONS



LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

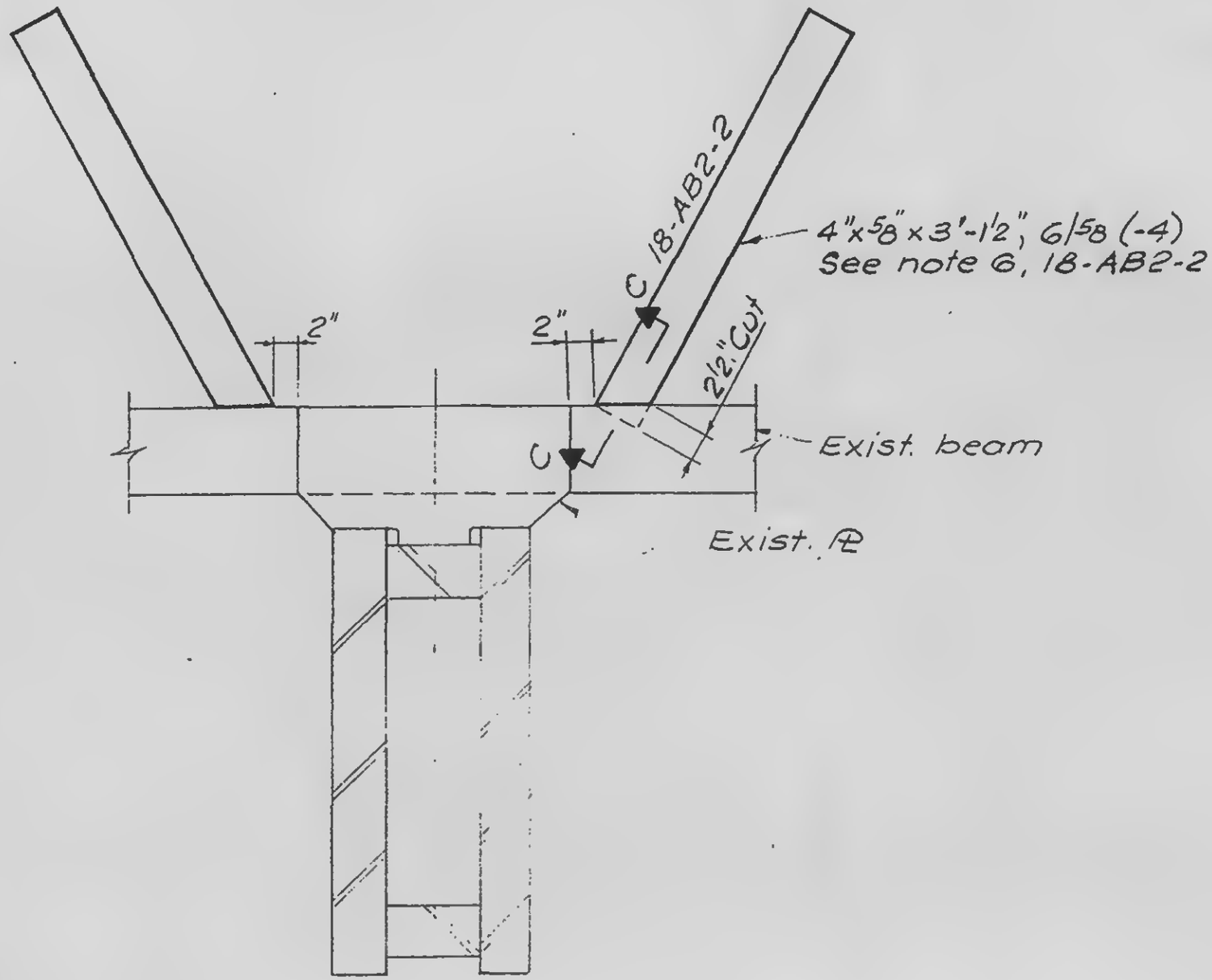
SIGNED
DRAWN S Wexler
REVIEWED

18-AB2-55

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS -CORE - DETAIL 56 | DATE: 12-13-68

REVISIONS



LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED
DRAWN
S Wexler
REVIEWED

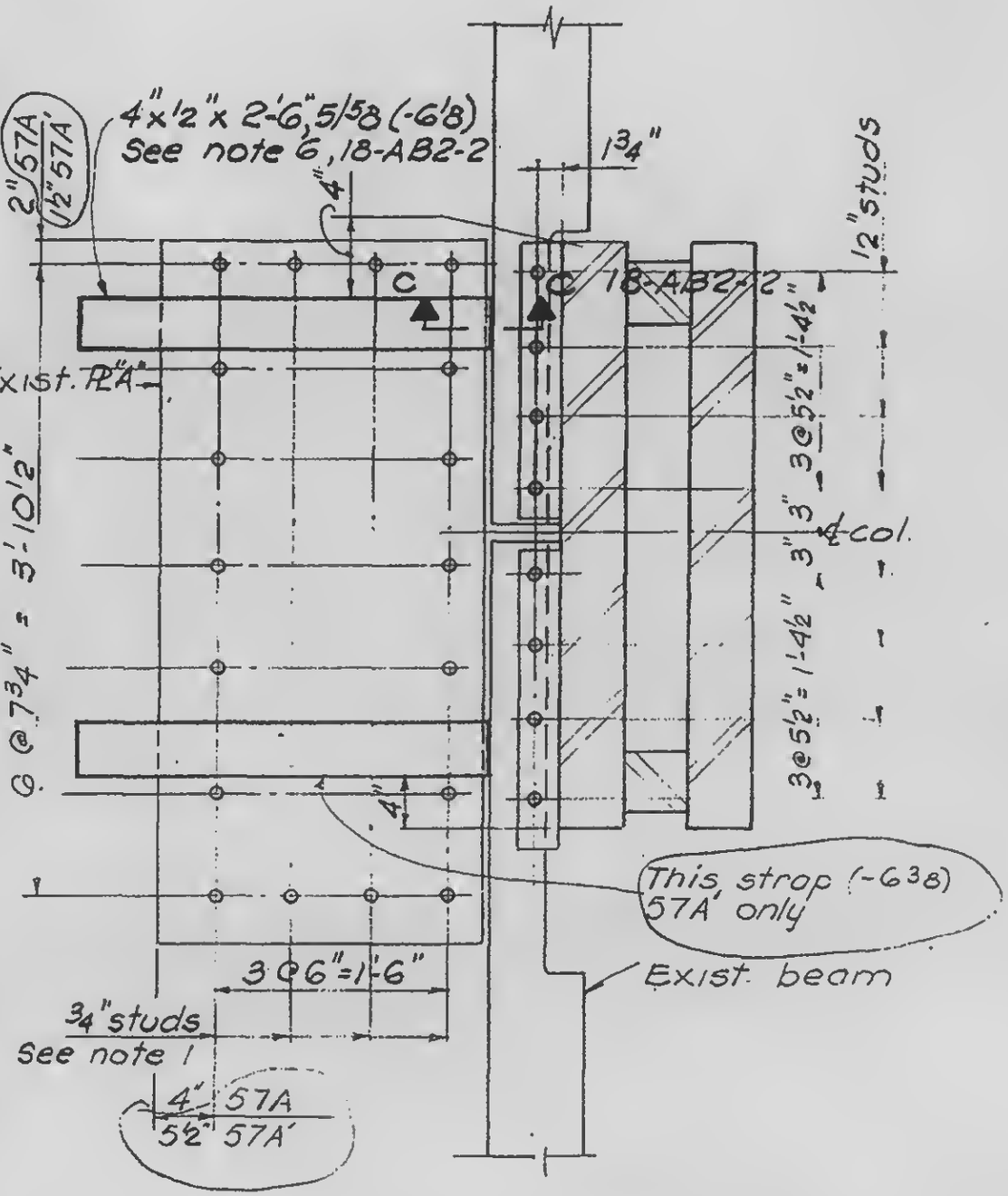
18-AB2-56

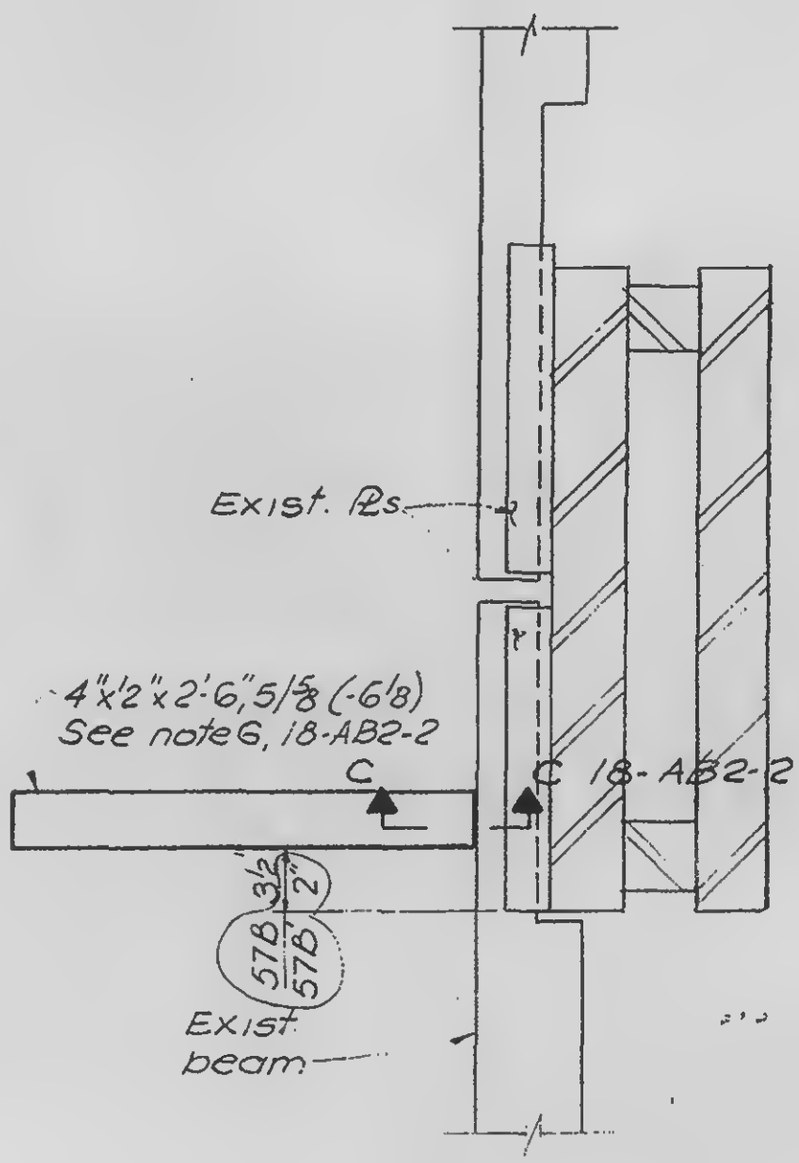
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS + CORE - DETAIL 57 | DATE 12-13-68

REVISIONS

1 1-69





DETAIL 57A, 57A'

Note 1 - Studs to be placed on exist. R"A" prior to installation of straps

DETAIL 57B, 57B'

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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

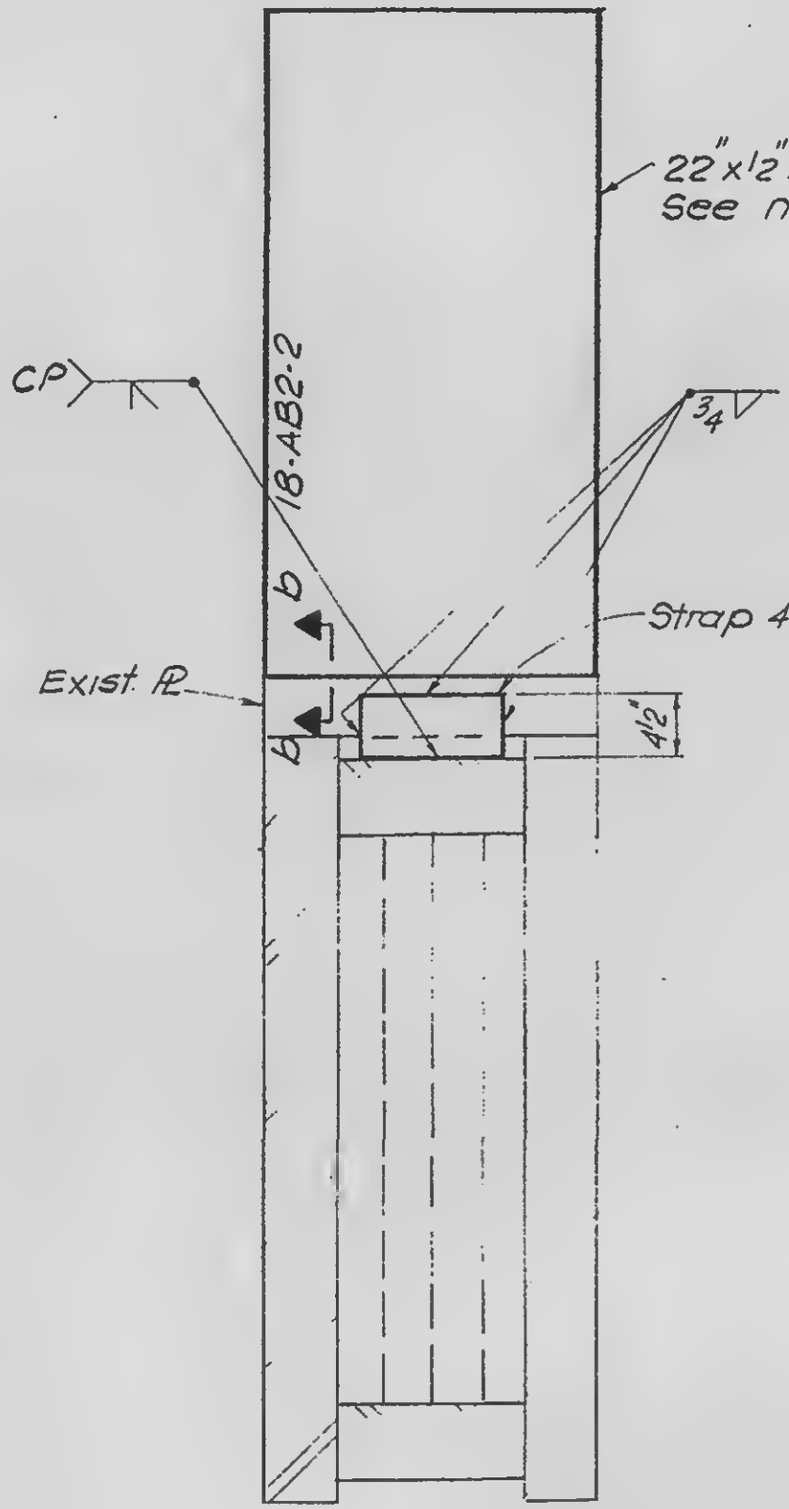
SIGNED
DRAWN S. Wexler
REVIEWED

18-AB2-57.1

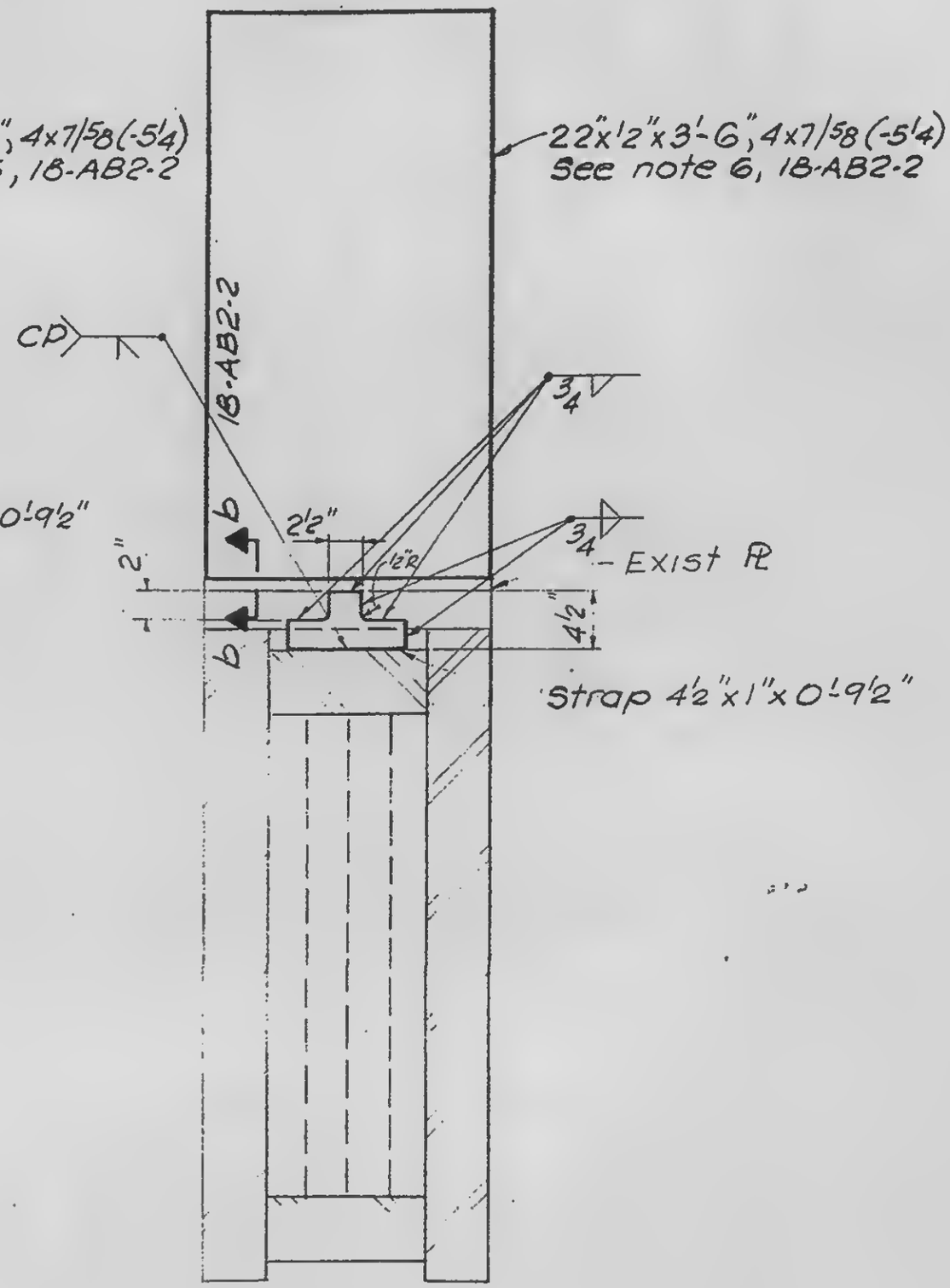
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 57 | DATE 12-13-68

REVISIONS



DETAIL 57C



DETAIL 57D

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED O'Neil

DRAWN S. Wexler

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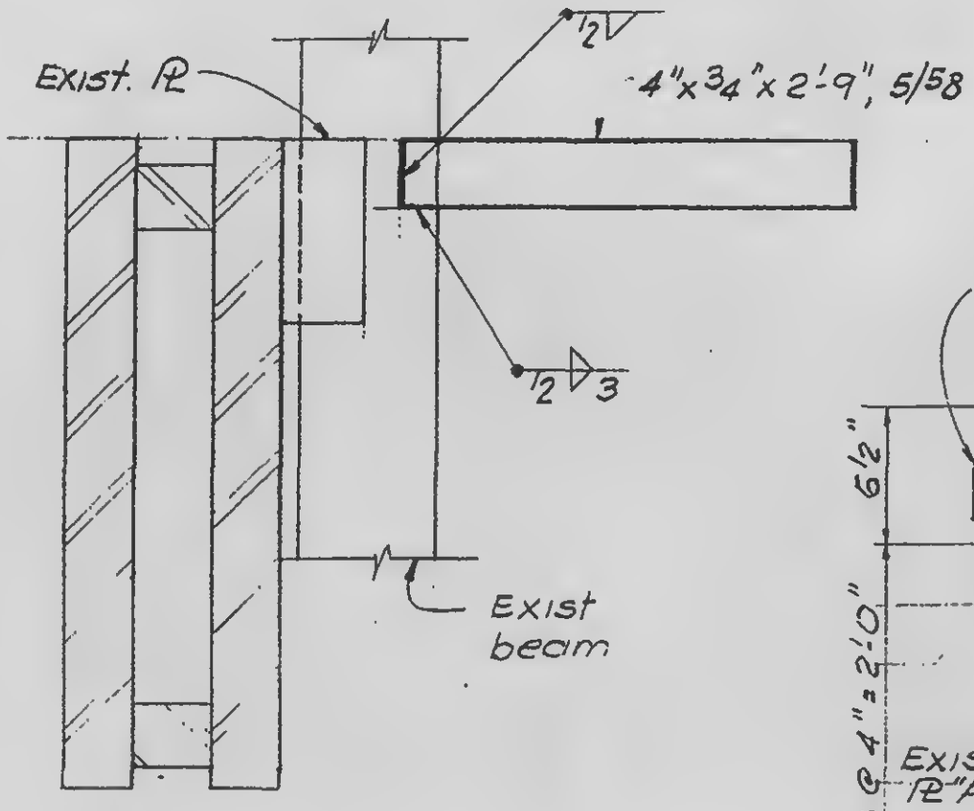
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SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

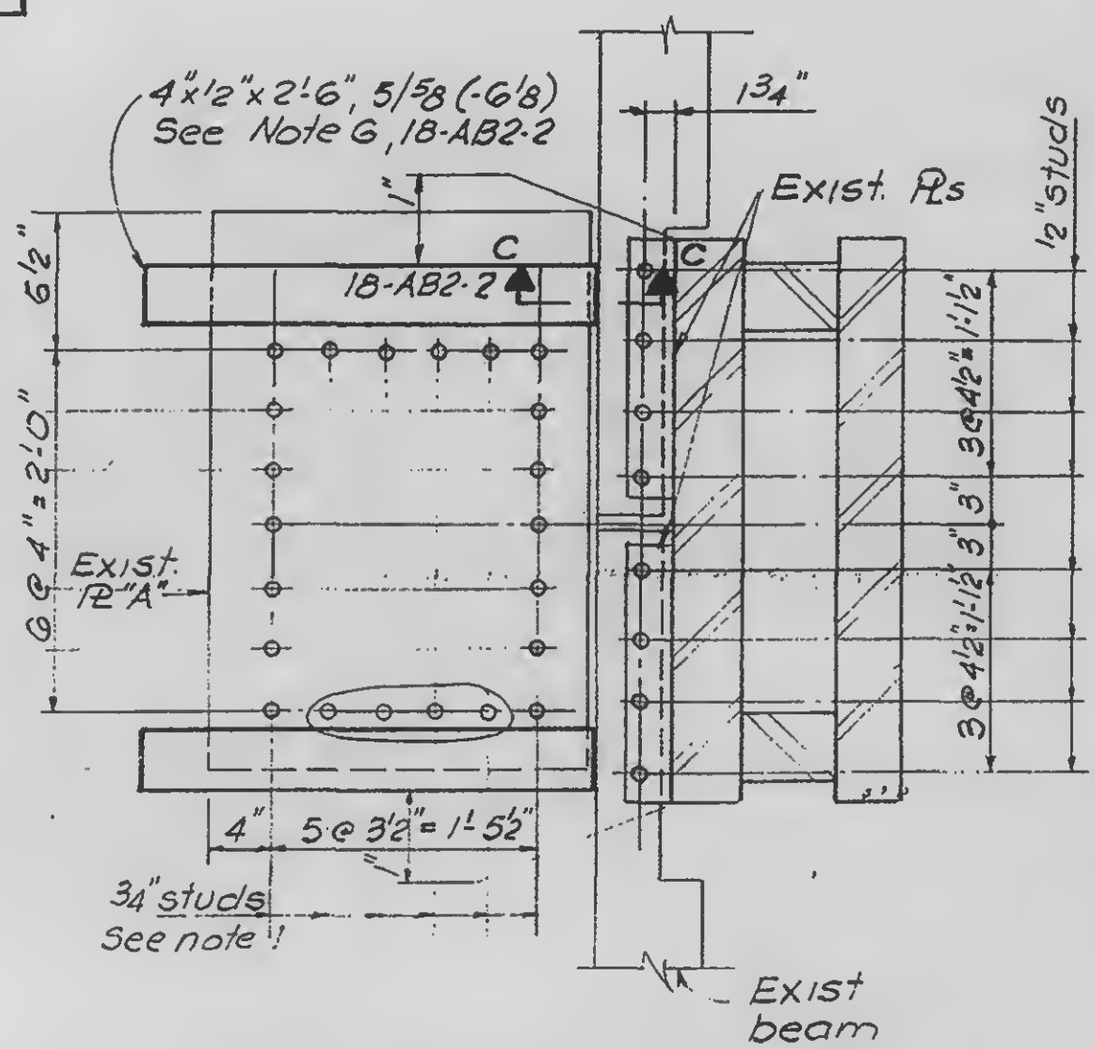
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS--CORE - DETAIL 57 | DATE 12-13-68

REVISIONS

1 1-69



DETAIL 57E



DETAIL 57F

Note 1 · Studs to be placed on exist. ℄ "A" prior to installation of straps.

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SIGNED
H. Helle

DRAWN
S. Wexler

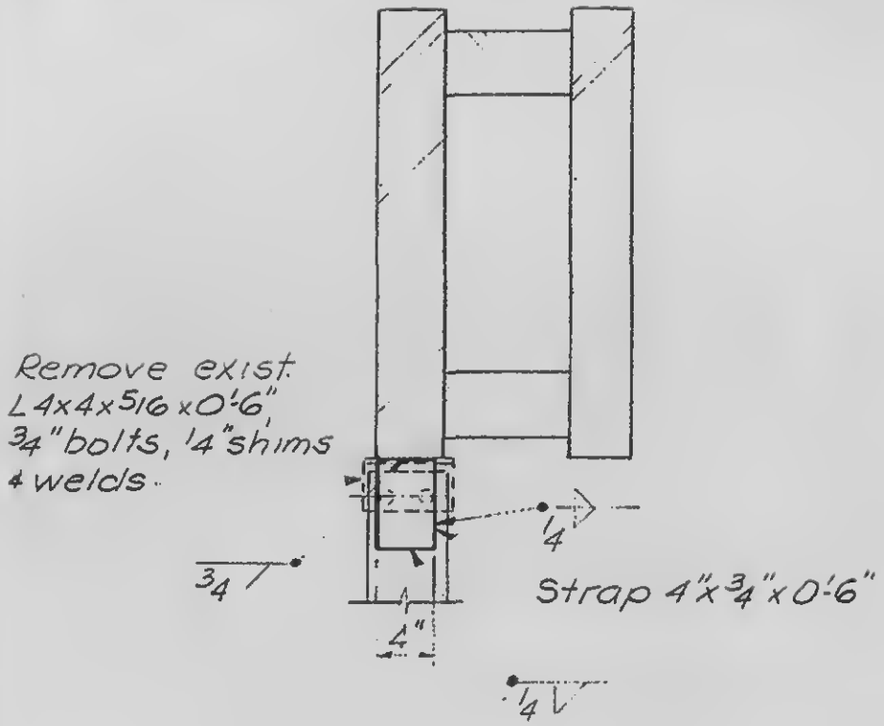
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18-AB2-57.3

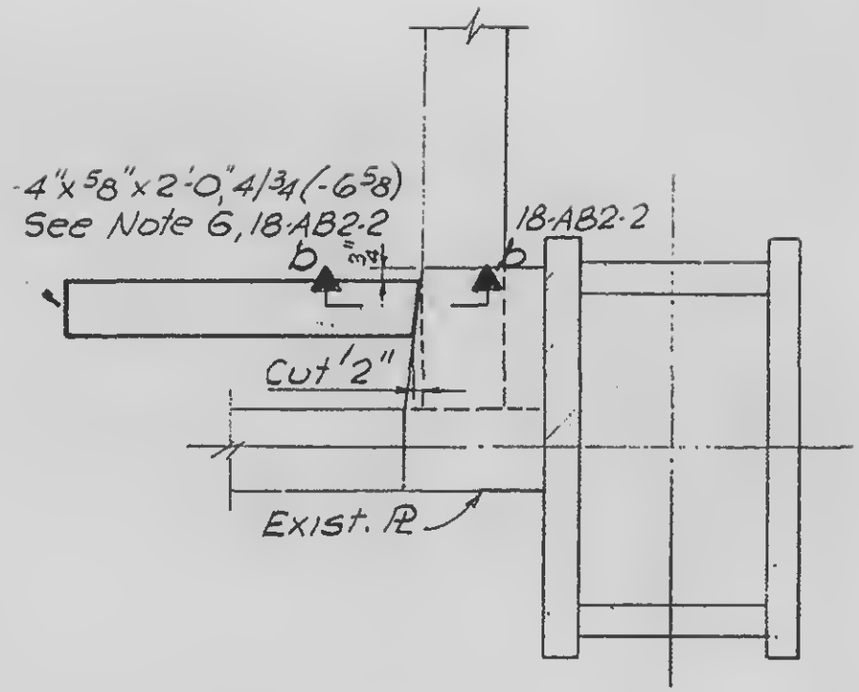
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS-CORE - DETAIL 57 | DATE 12-13-68

REVISIONS



DETAIL 57G



DETAIL 57H

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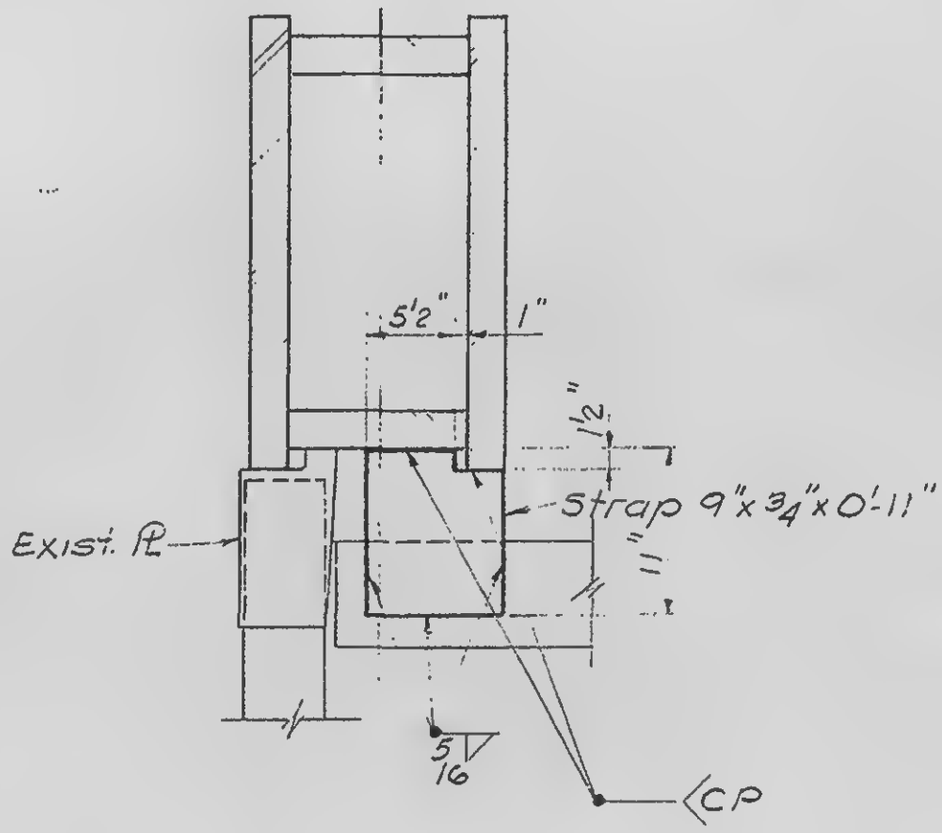
DESIGNED T. O'Neil
DRAWN S. Wexler
REVIEWED

18-AB2-57.4

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 58 | DATE 12-13-68

REVISIONS



DETAIL 58A

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No. 34360
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DESIGNED L. O'Neill

DRAWN S. Wexler

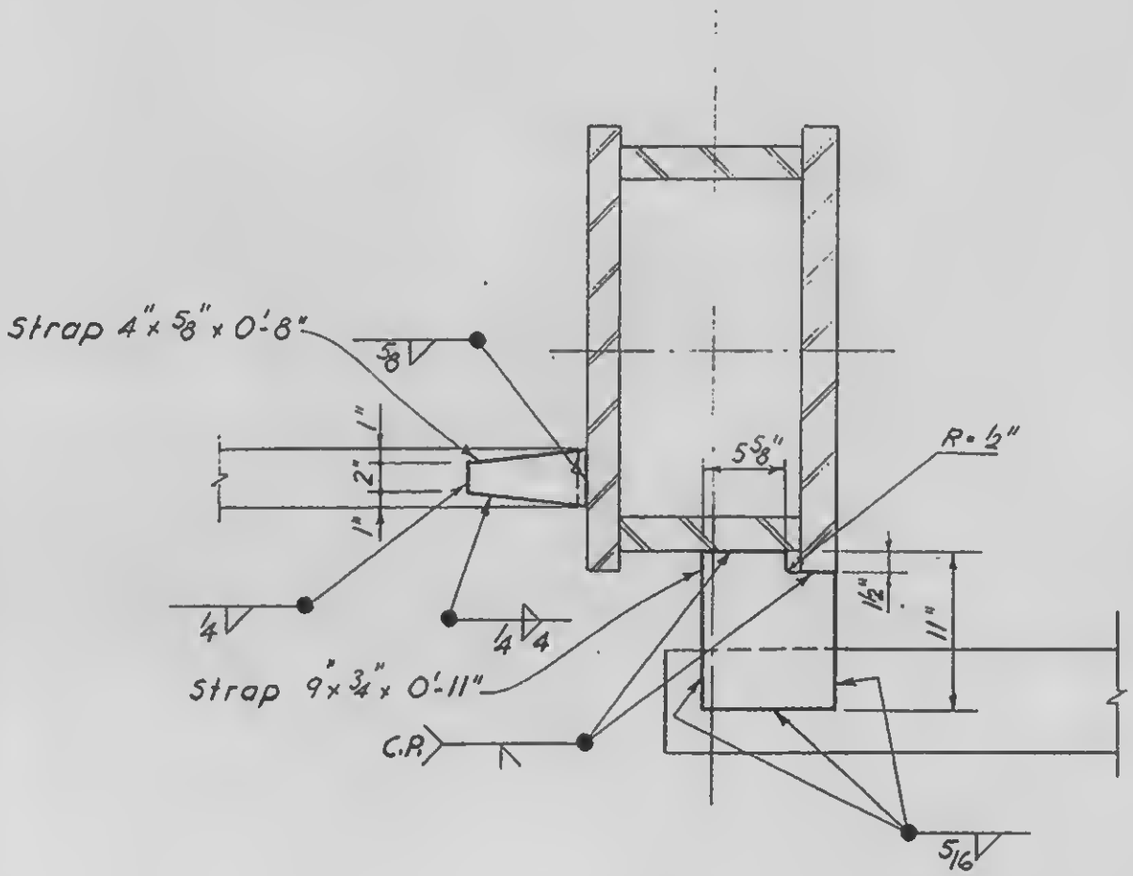
REVIEWED

18-AB2-58

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 59 | DATE: 2-7-69

REVISIONS



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No. 34360
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DESIGNED L. O'Neill
DRAWN F. Smith
REVIEWED W. Brewer

18 - AB2.59

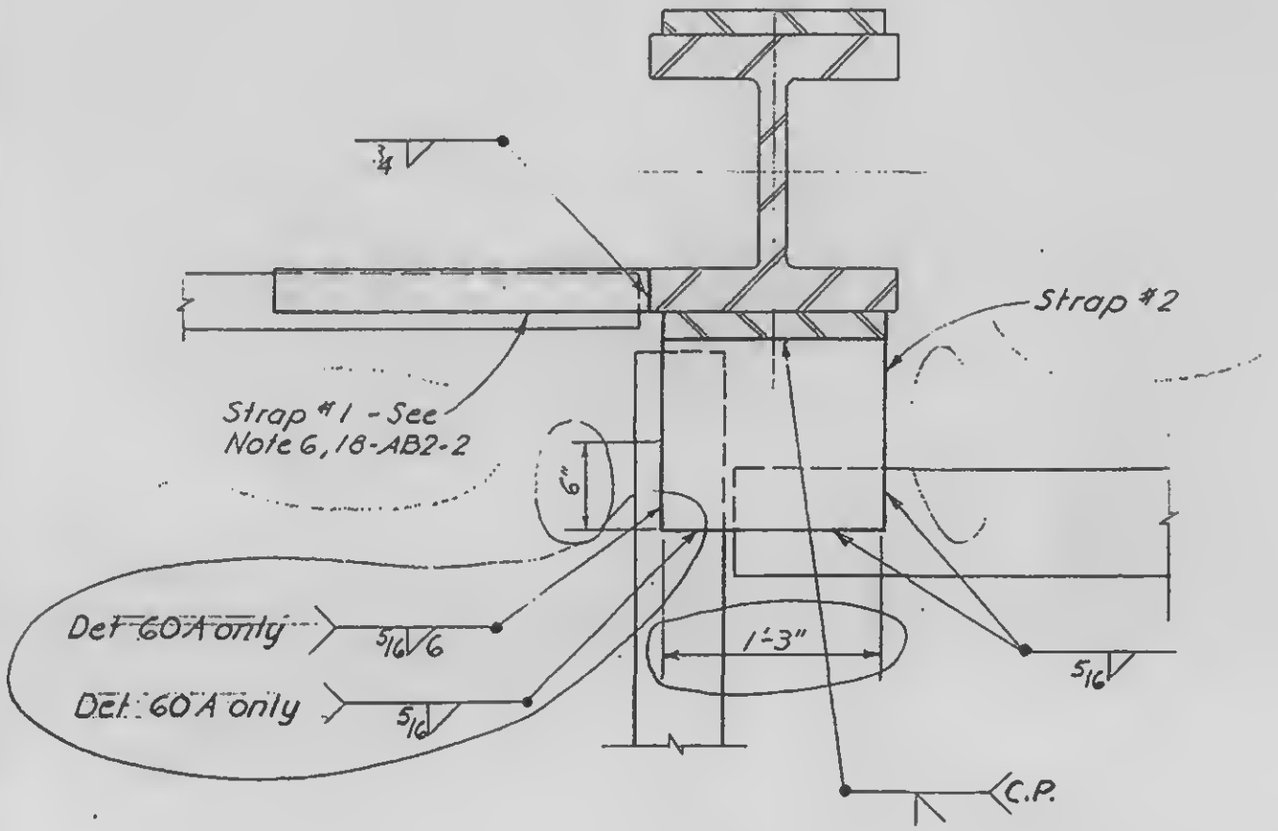
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 60 | DATE: 2-7-69

REVISIONS

4-30-69

Detail No	Strap #1 — Studs		Strap #2
60	3" x ¾" x 2'-1½"	4/⅝	13" x ¾" x 1'-3"
60A	3" x ⅜" x 1'-7½"	3/⅝	15" x ¾" x 1'-4"



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66

DESIGNED: L. O'Neill

DRAWN: F. Smith

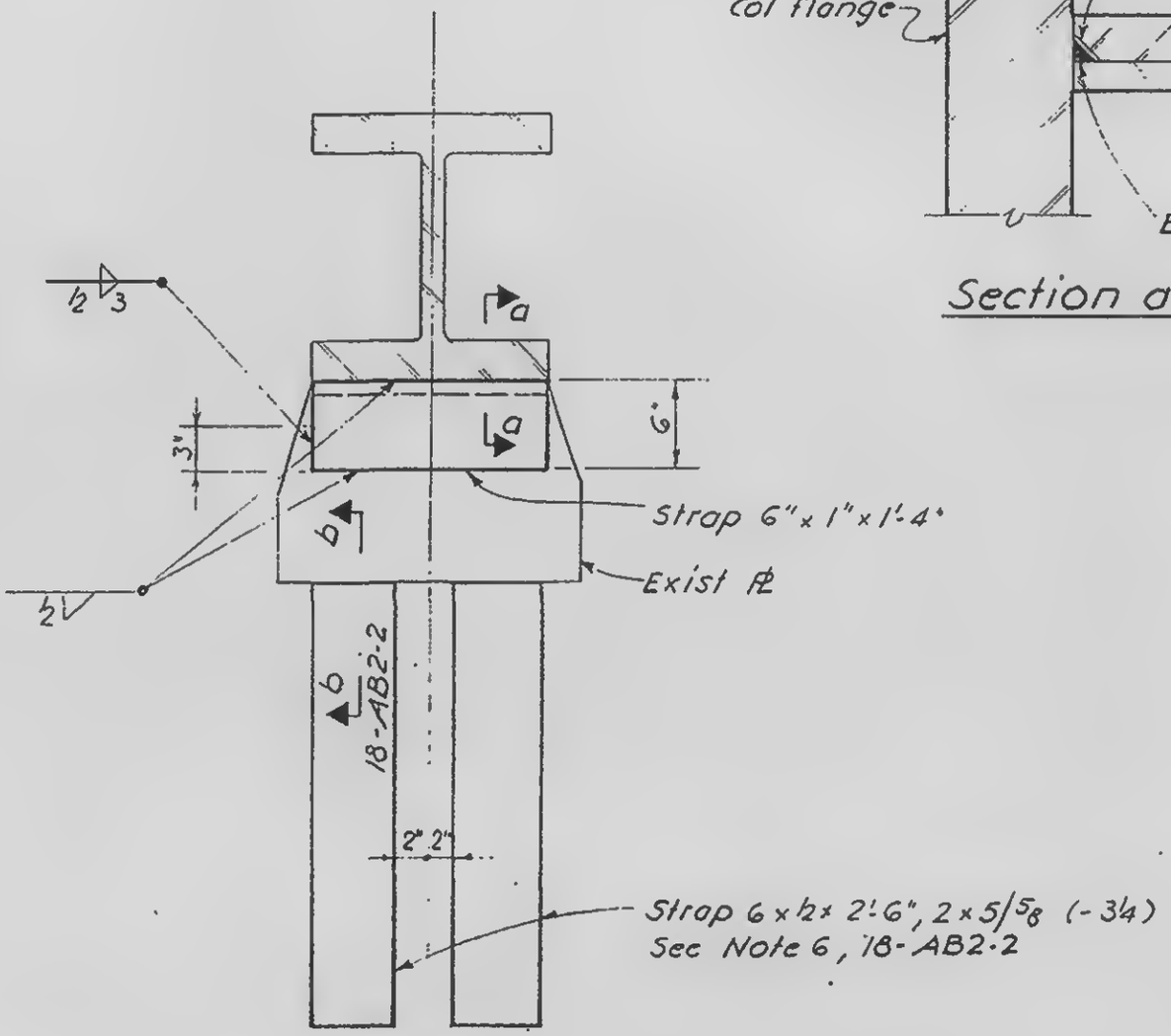
REVIEWED: W. Brewer

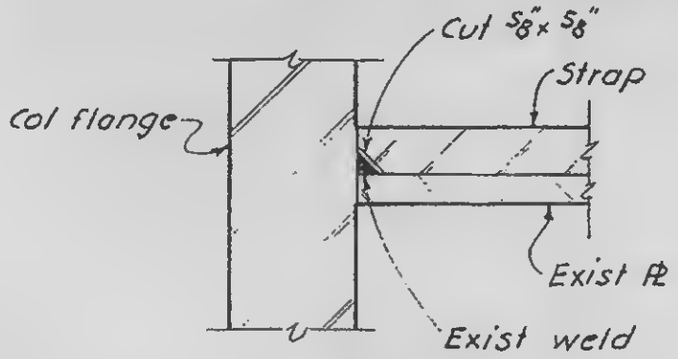
18-AB.2-60.

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PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR - CORE - DETAIL 61 | DATE 4/30/69

REVISIONS





Section a-a

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L7

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DRAWN F. L. Smith

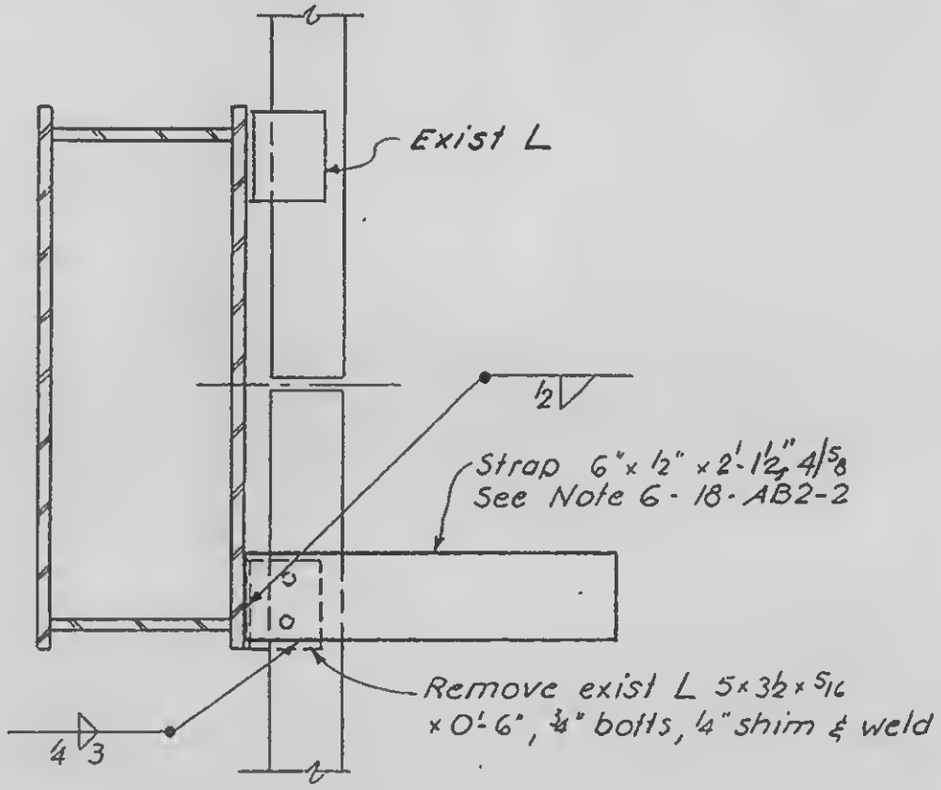
REVIEWED W. Brewer

18-AB2-61

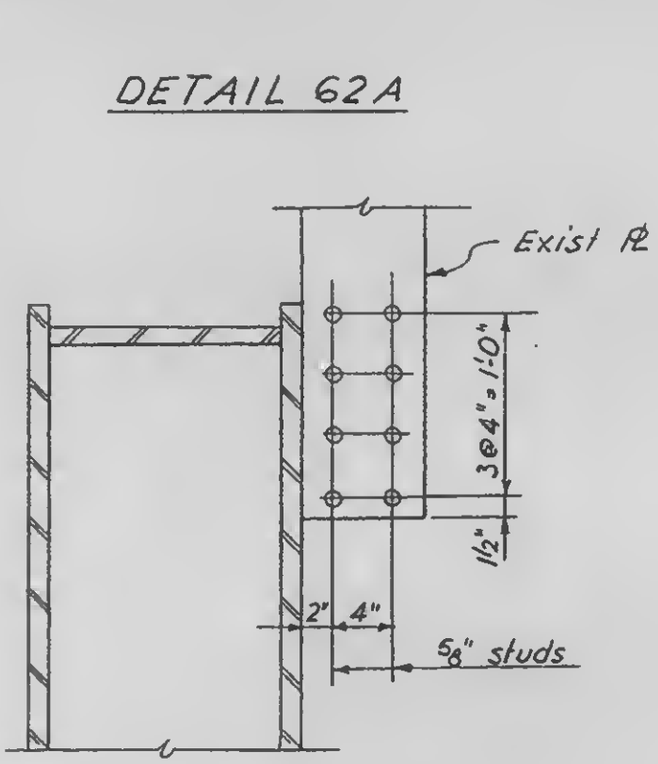
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 62 | DATE 4/30/69

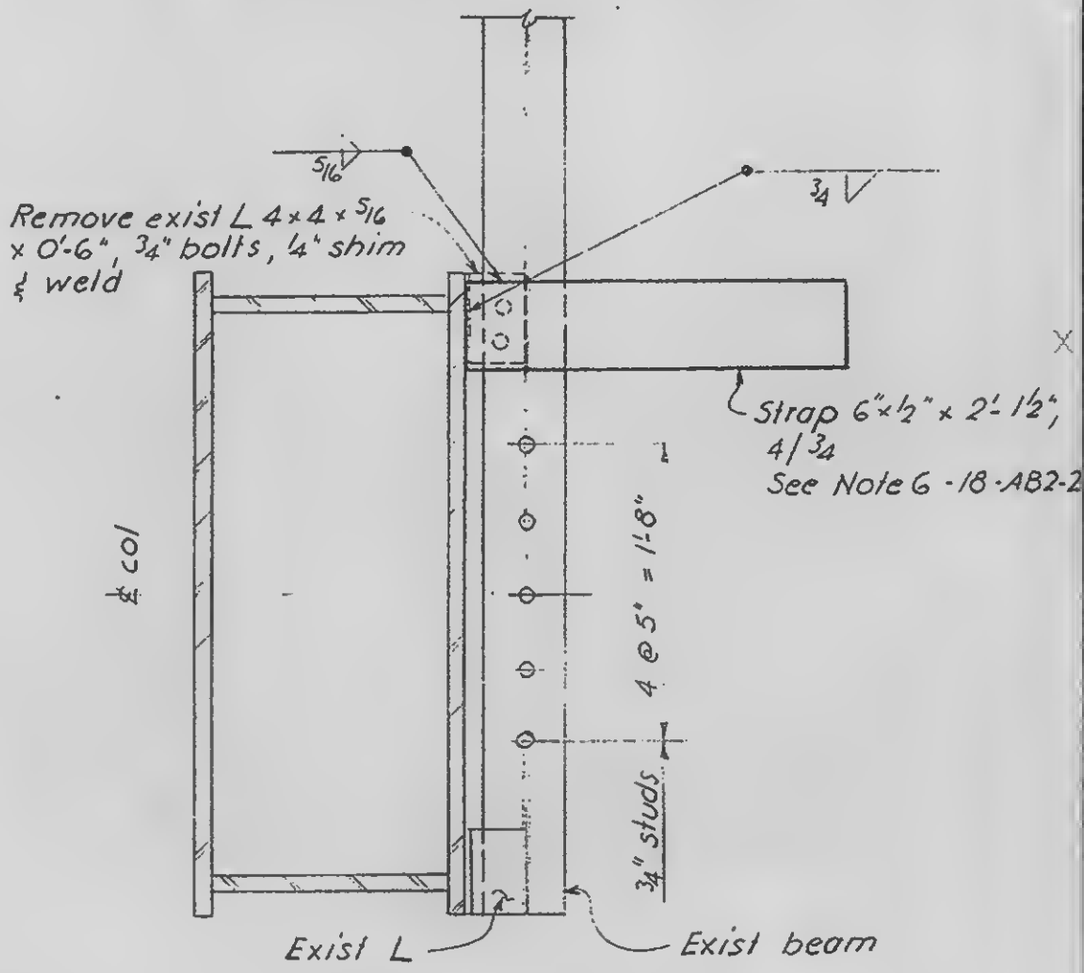
REVISIONS



DETAIL 62A



DETAIL 62B



DETAIL 62C

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

6d
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DRAWN
F. Smith

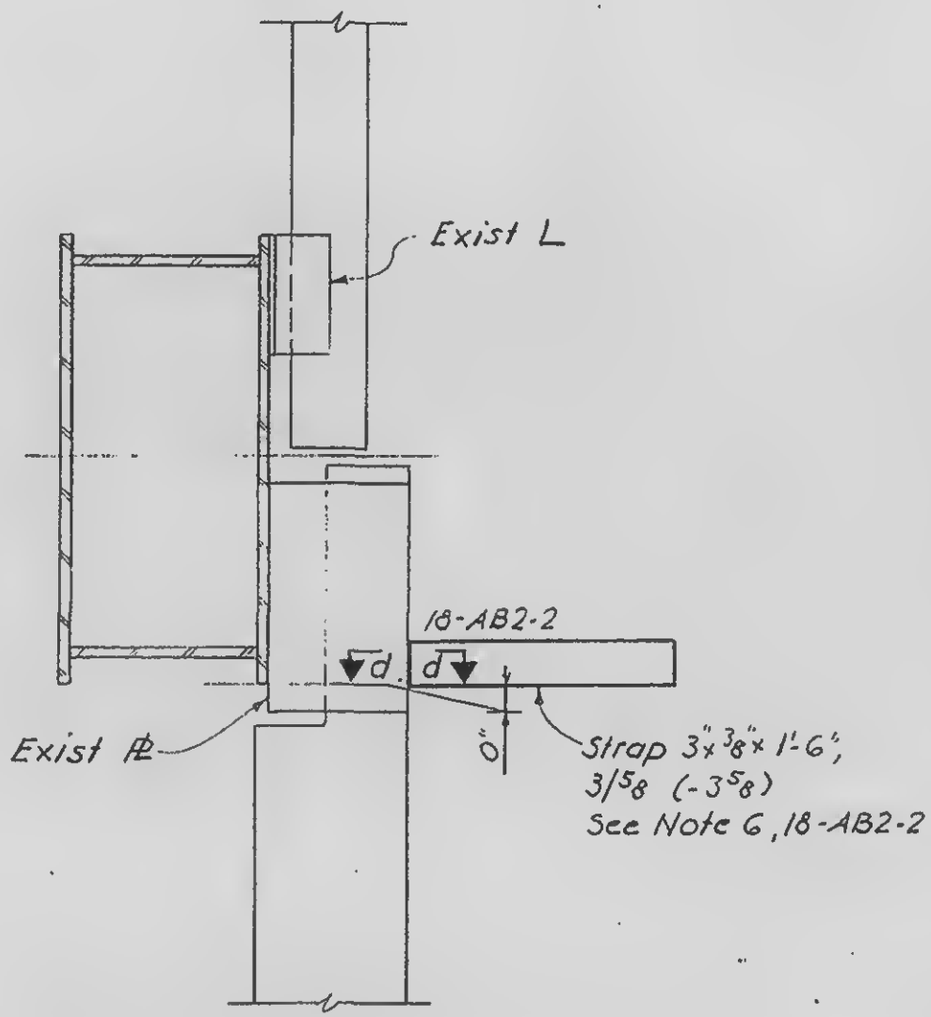
REVIEWED
W. Brewer

18-AB2-62.1

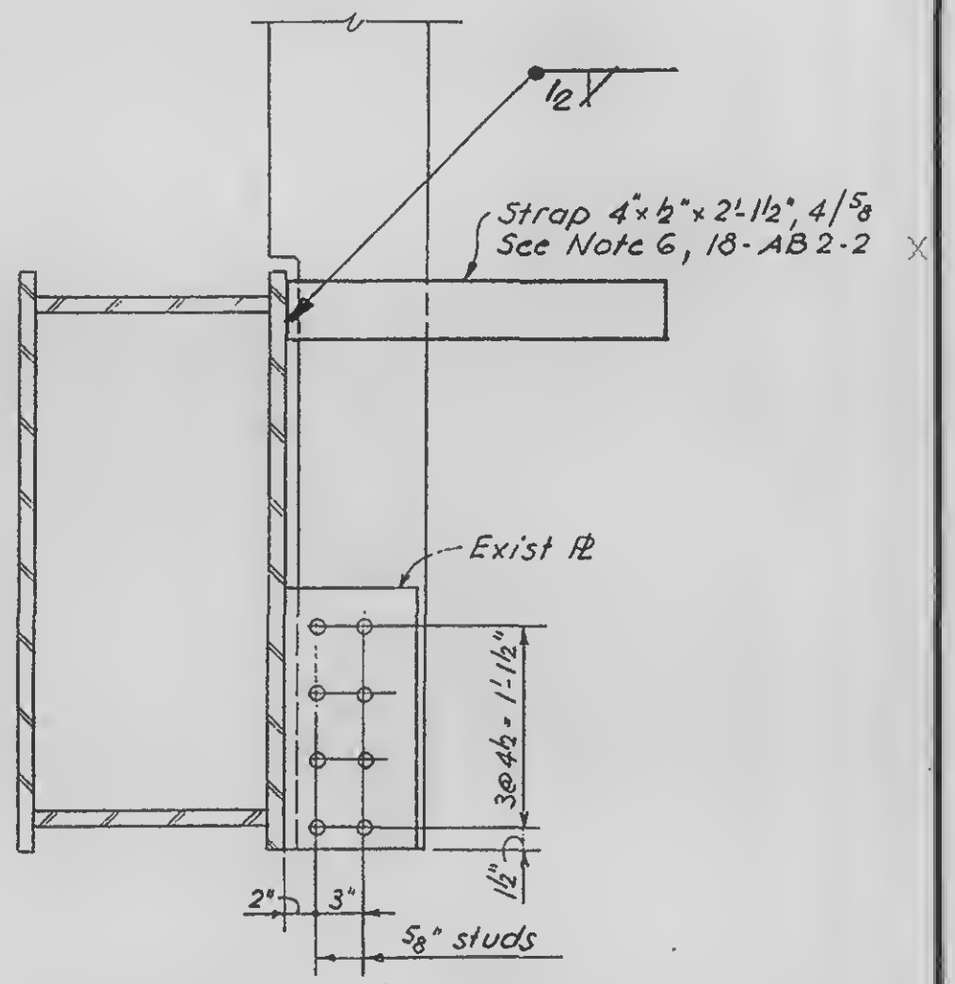
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - DETAIL 62 | DATE: 4/30/69

REVISIONS



DETAIL 62D



DETAIL 62E.

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LG
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E. Smith

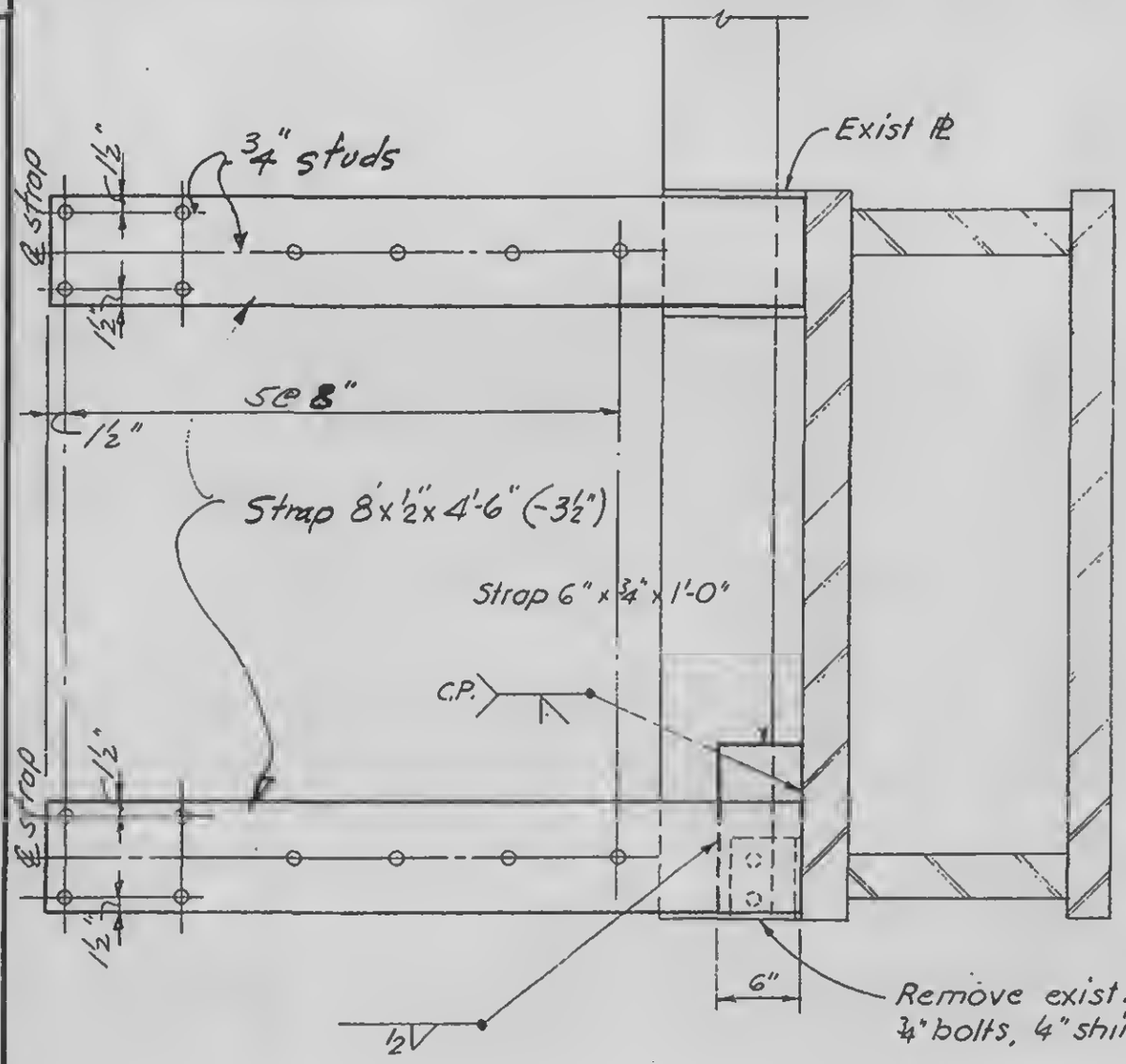
REVIEWED
W. Brewer

18-AB.2-62.2

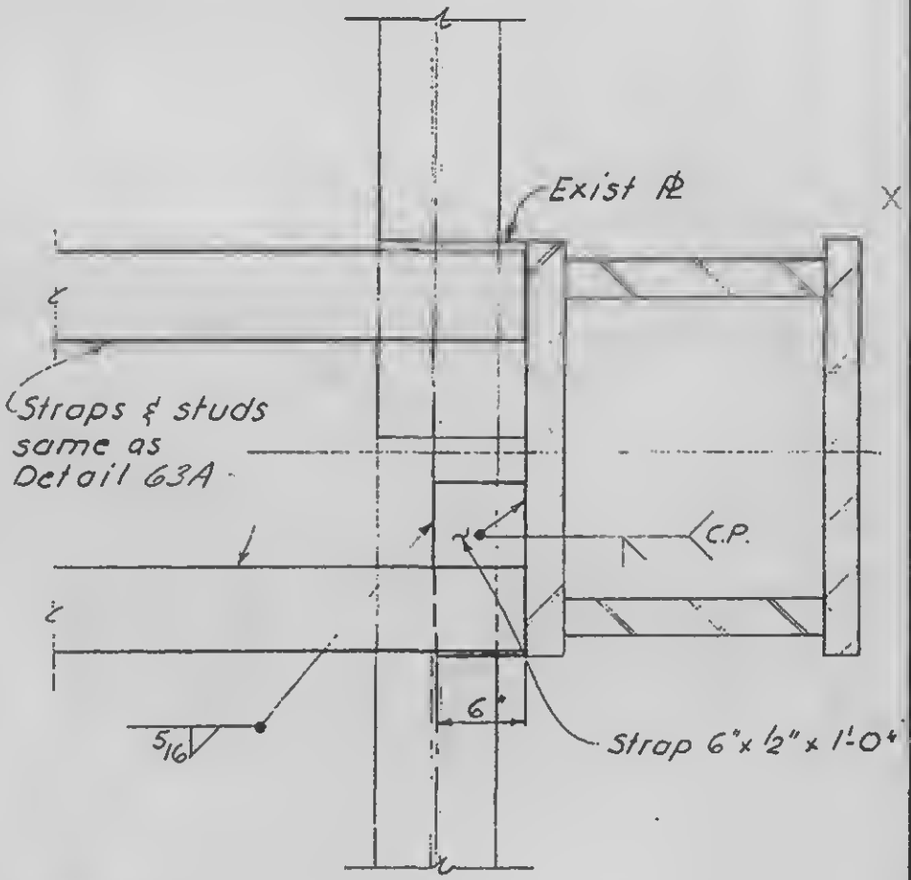
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR - CORE - DETAIL 63 | DATE 4/30/69

REVISIONS



DETAIL 63A



DETAIL 63B

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70
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F. Smith

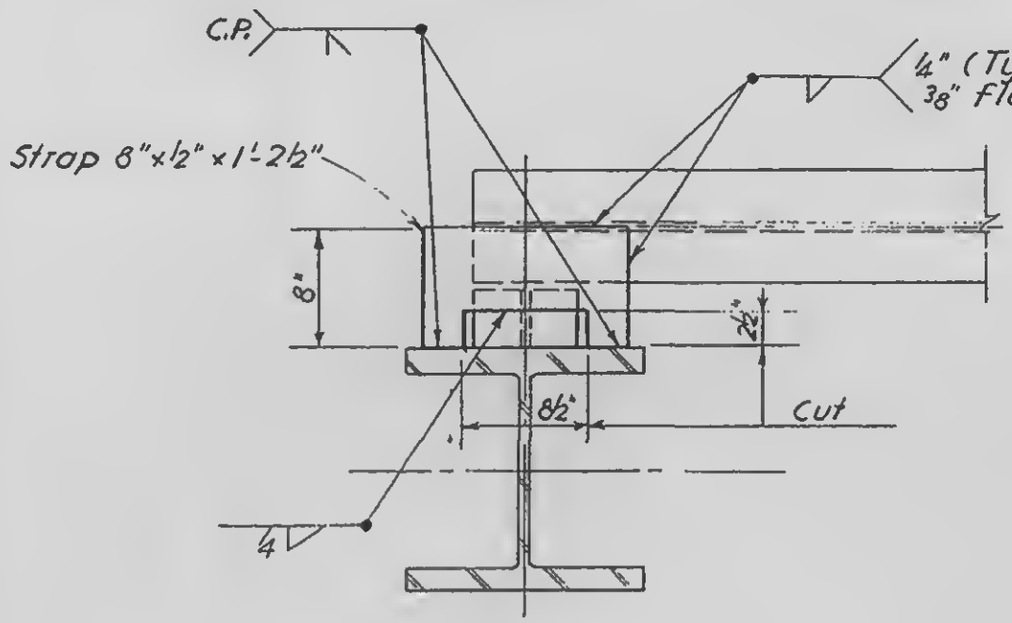
REVIEWED
W. Brewer

18-AB2-63

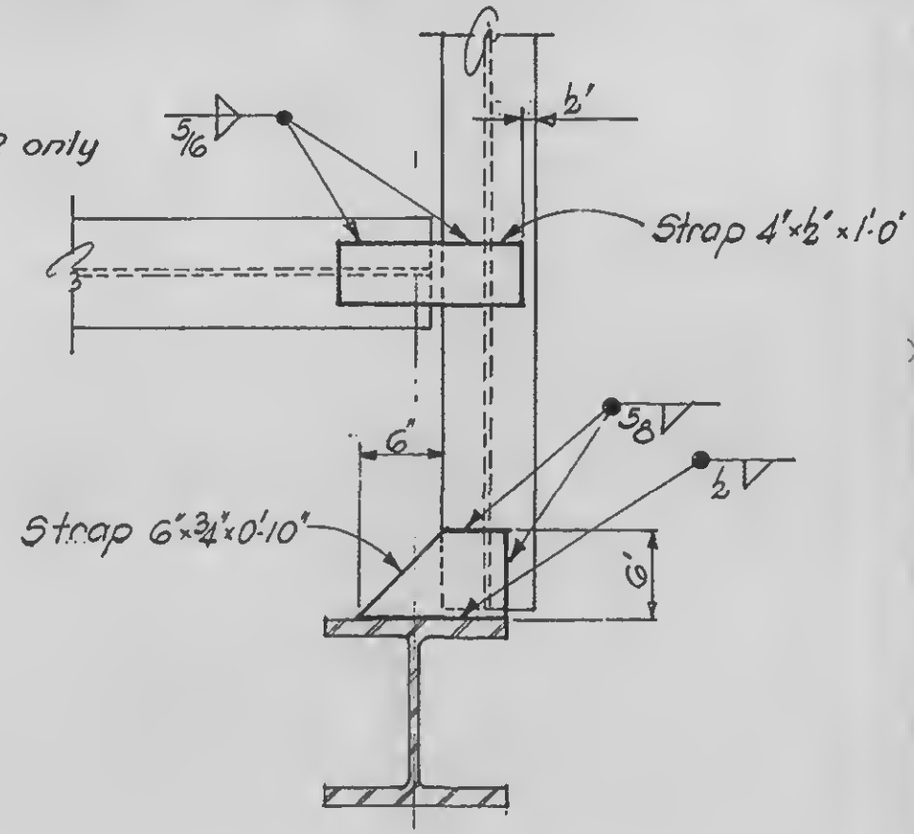
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR - CORE - DETAIL 64 | DATE 4/30/69

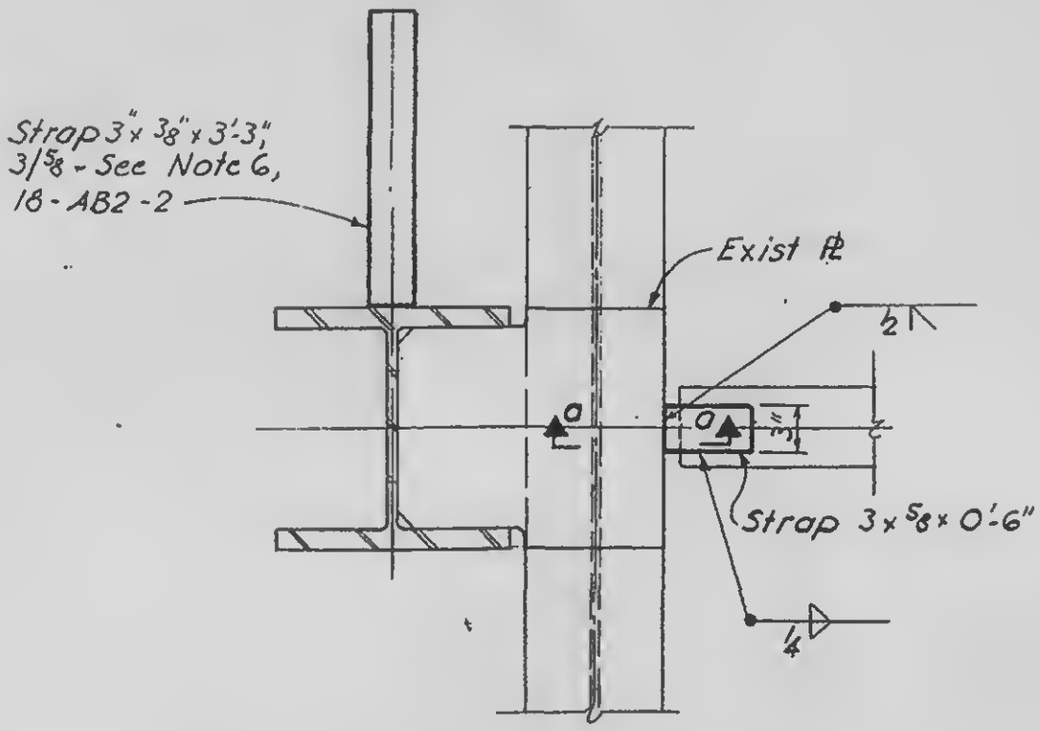
REVISIONS



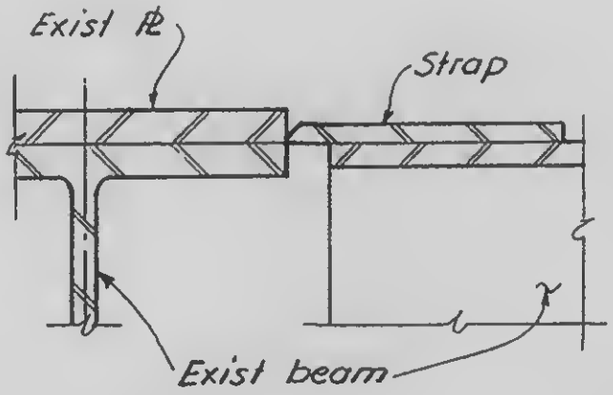
DETAIL 64 A



DETAIL 64 C



DETAIL 64 B



Section a-a

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LESLIE E. ROBERTSON
No. 34360
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DRAWN F. Smith

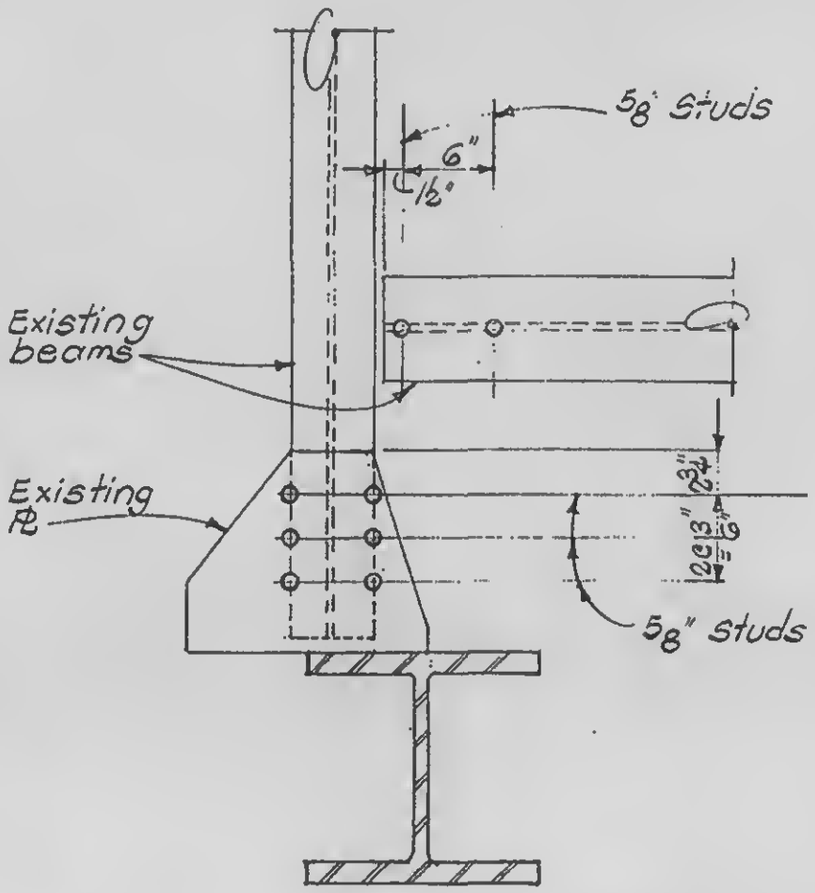
REVIEWED W. Brewer

18 - AB2 - 64.1

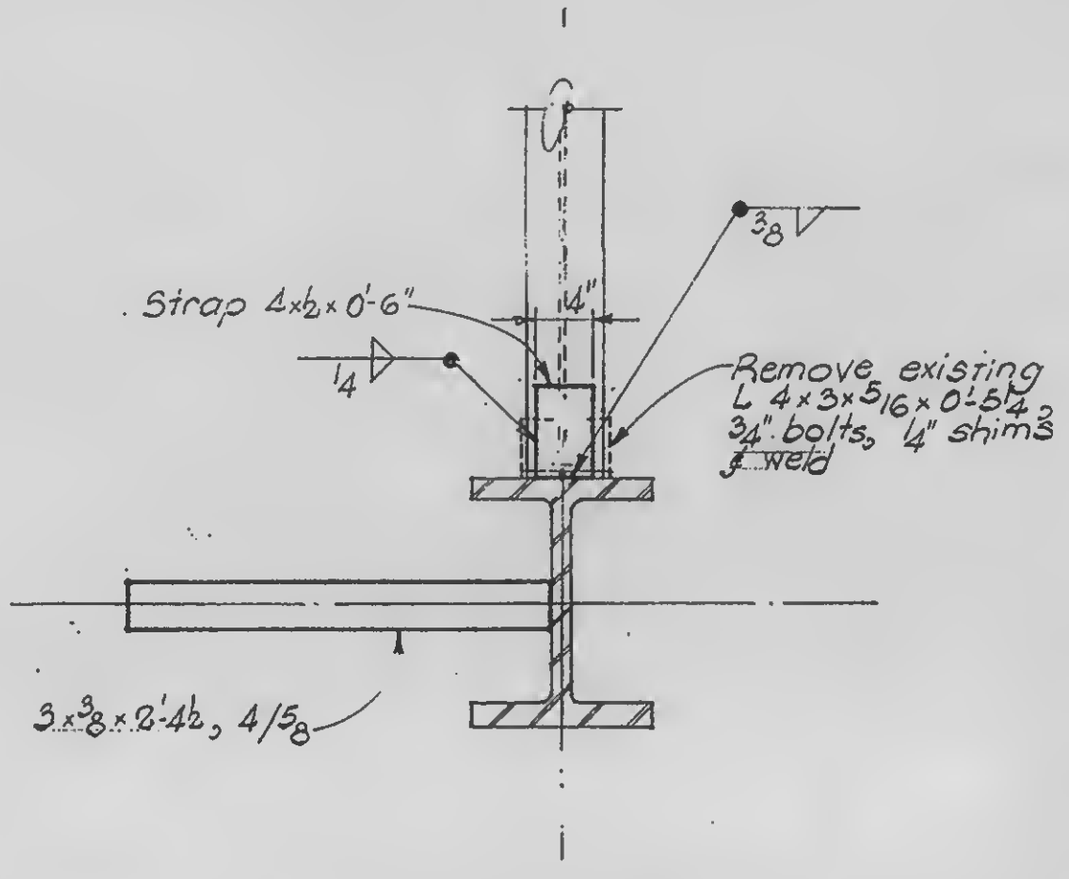
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR CORE DETAIL 64 | DATE 4/30/69

REVISIONS



SECTION 64D



SECTION 64E

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No. 34360
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2

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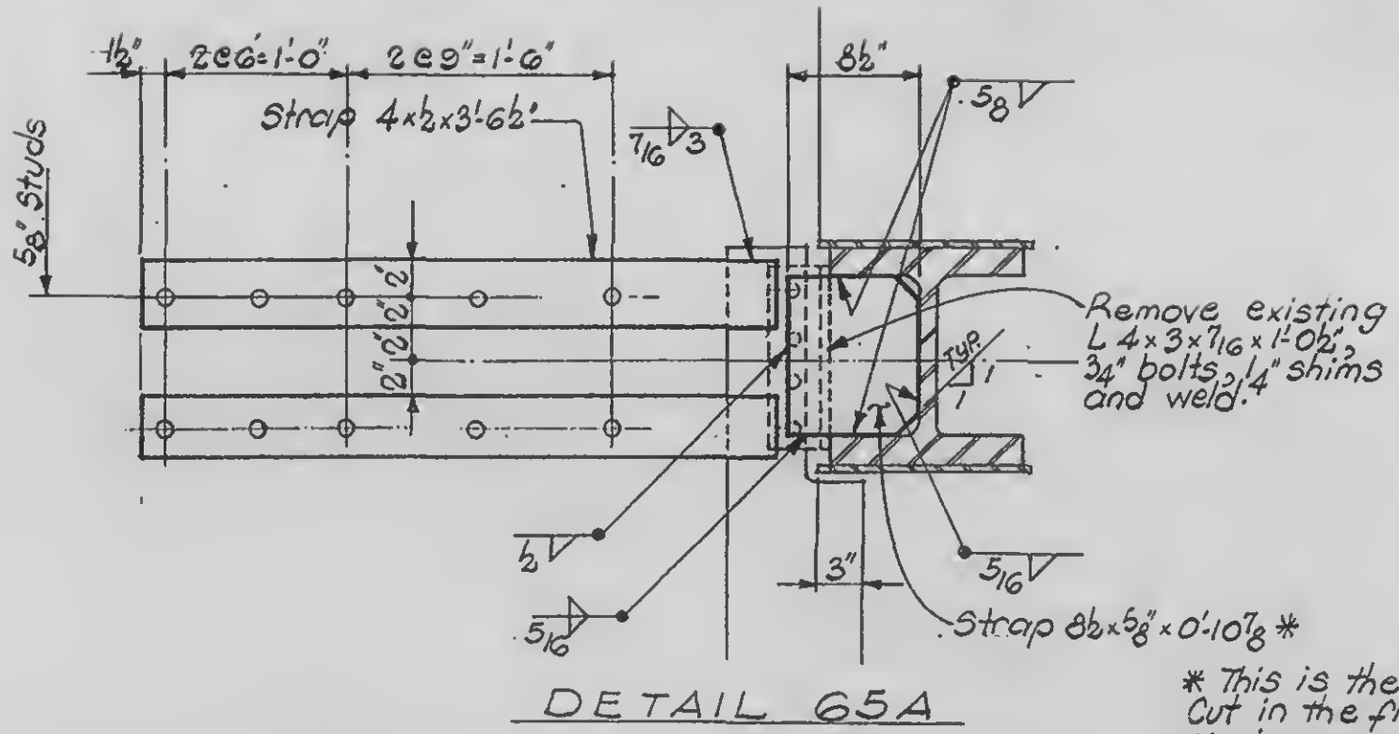
REVIEWED W. Brewer

18-A82-64.2

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

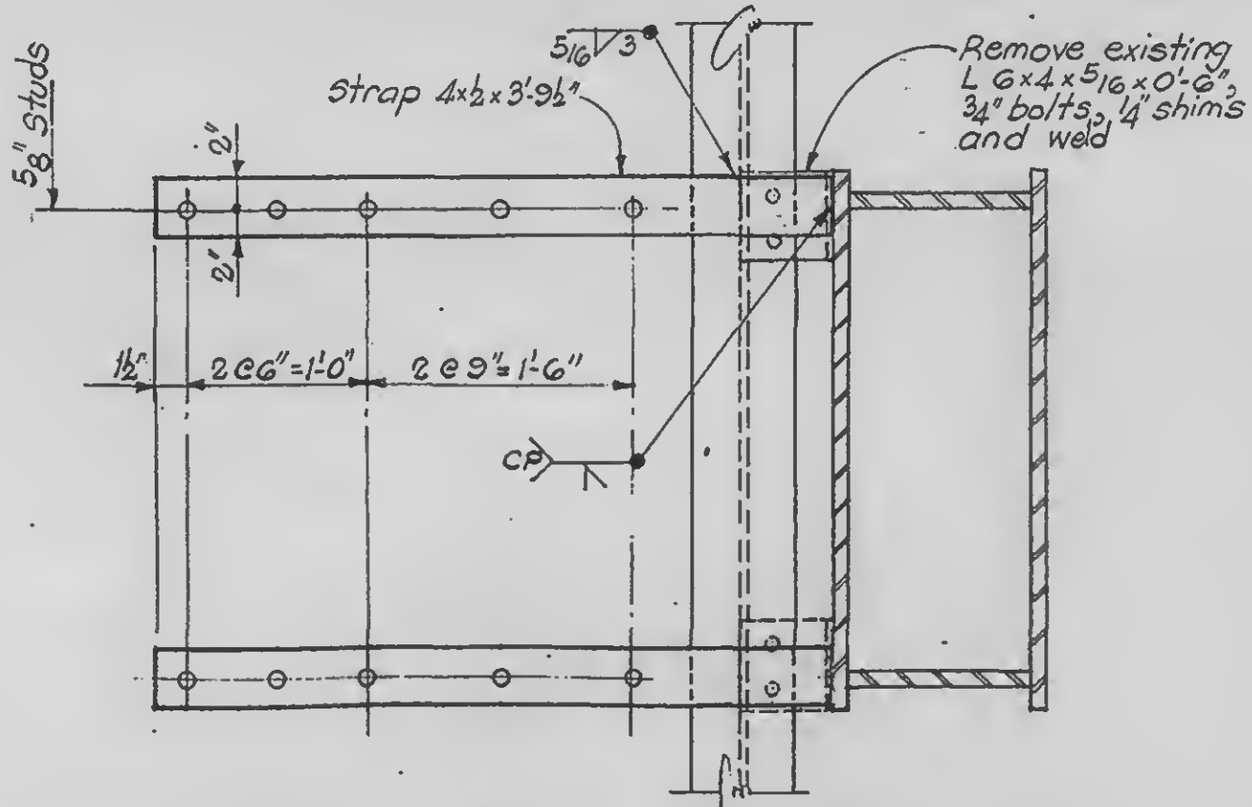
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR CORE DETAIL 65 | DATE 4-30-69

REVISIONS



DETAIL 65A

* This is the theoretical dimension. Cut in the field from 8½"×5/8"×1'-0" Maximum gap permitted between strap and column flange is 3/16"



DETAIL 65B

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S.T.M.

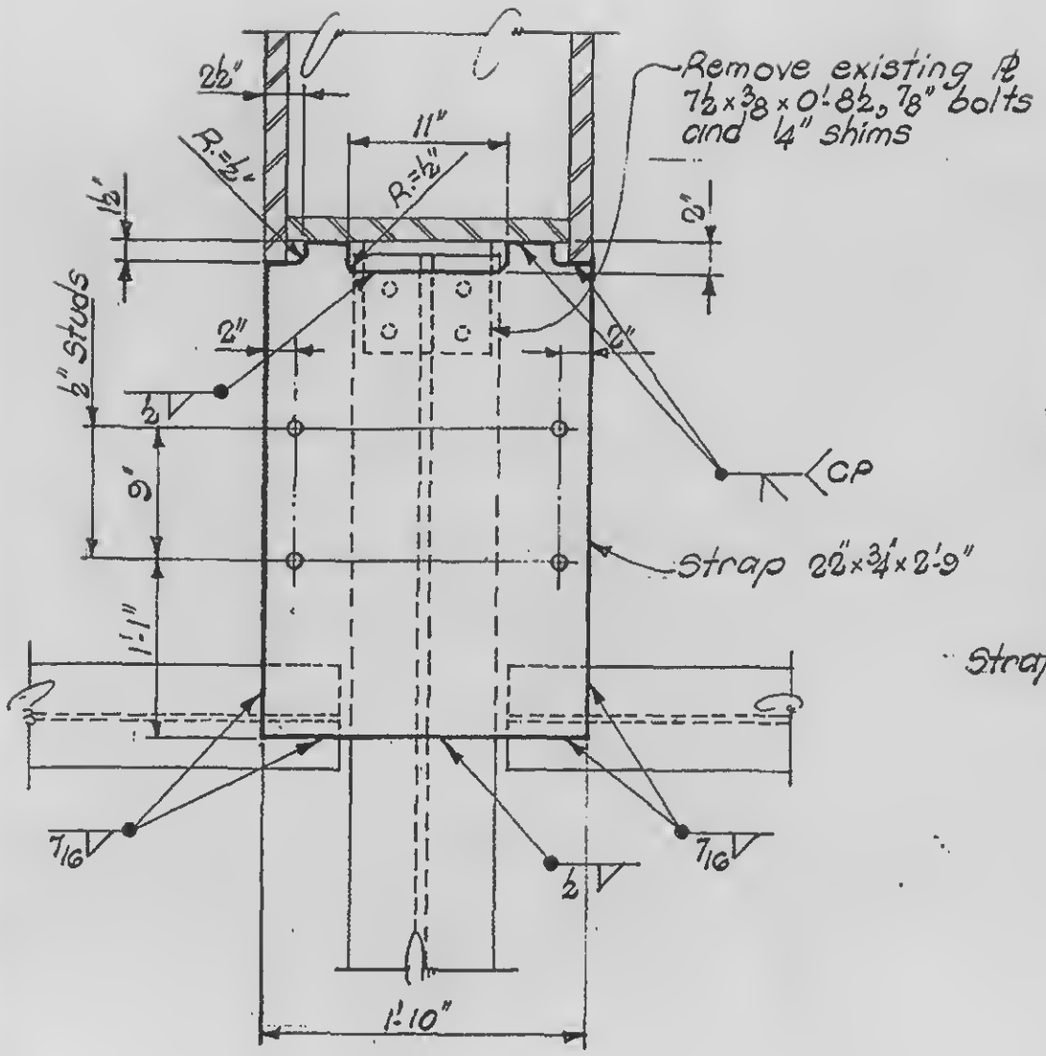
REVIEWED
W. Brewer

18-AB2-65

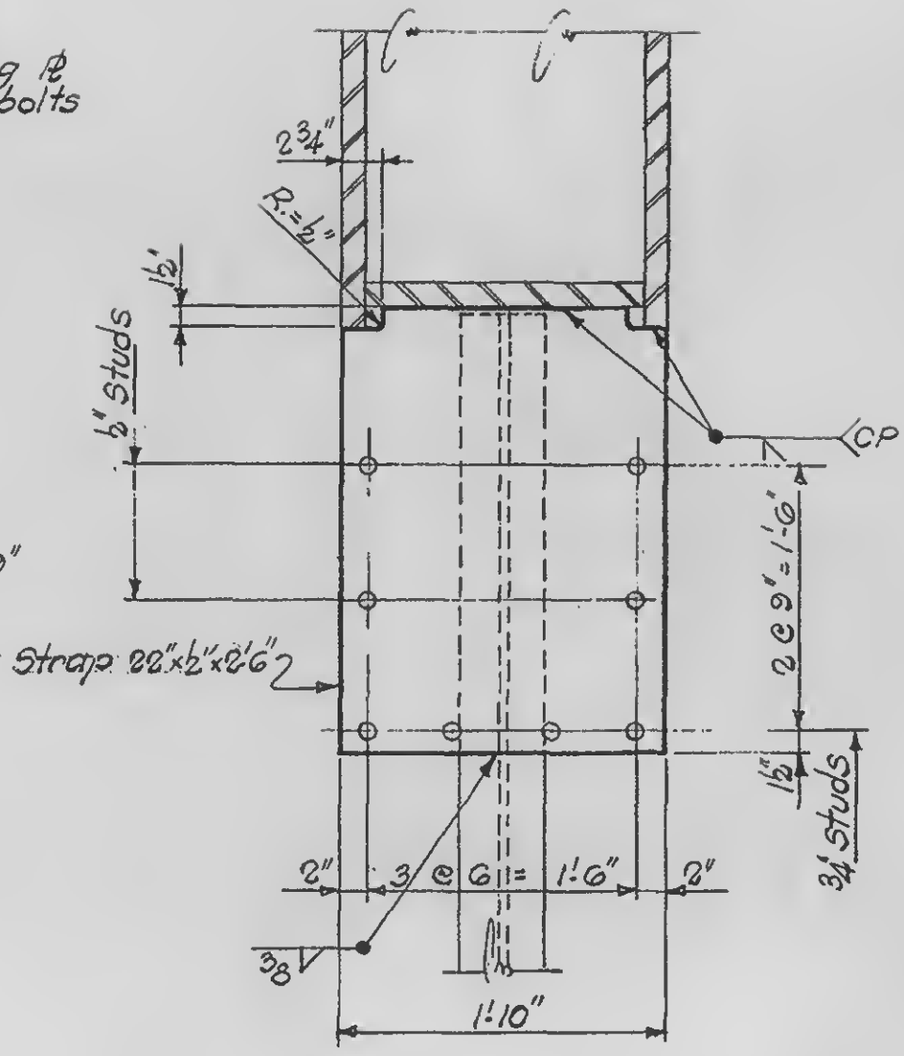
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR CORE DETAIL 66 | DATE 4-30-69

REVISIONS



DETAIL 66A



DETAIL 66B

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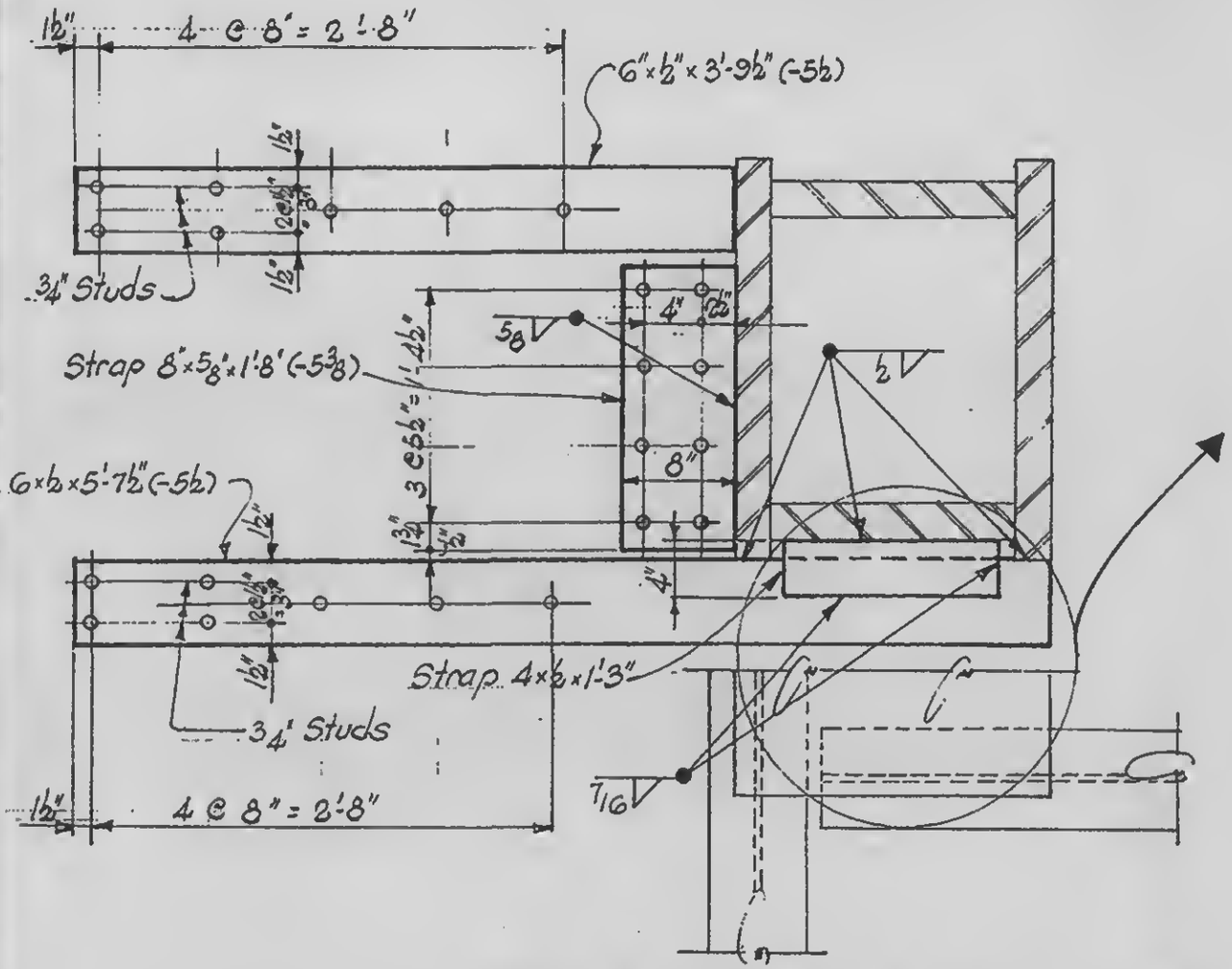
LICENSED PROFESSIONAL ENGINEER LESLIE E. ROBERTSON No. 34360 UNIVERSITY OF THE STATE OF NEW YORK

18-AB2-66.1

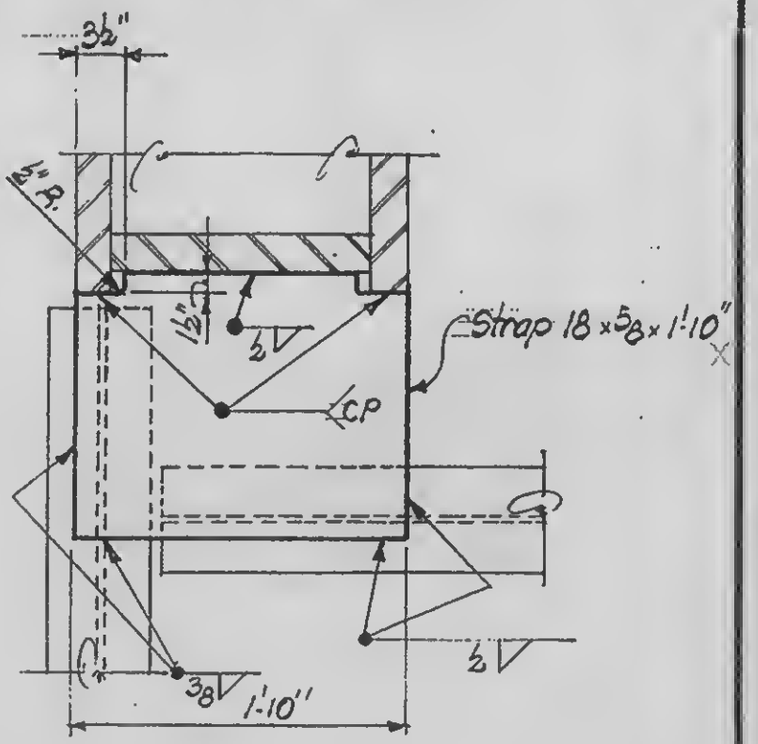
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

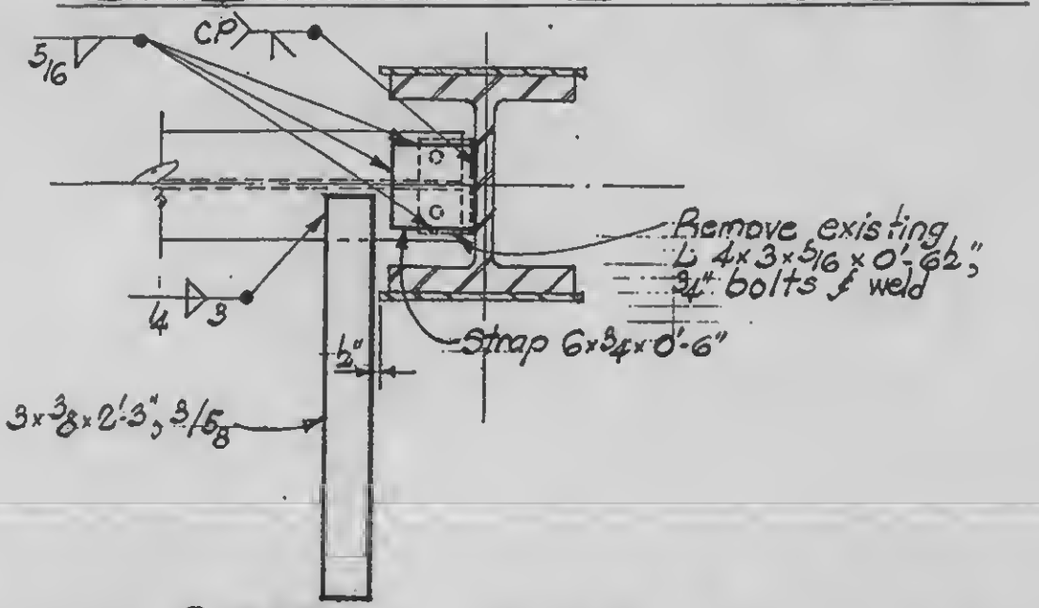
PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR CORE DETAIL 66 | DATE: 4-30-69

REVISIONS



DETAIL 66C





DETAIL 66D

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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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S.T.M.

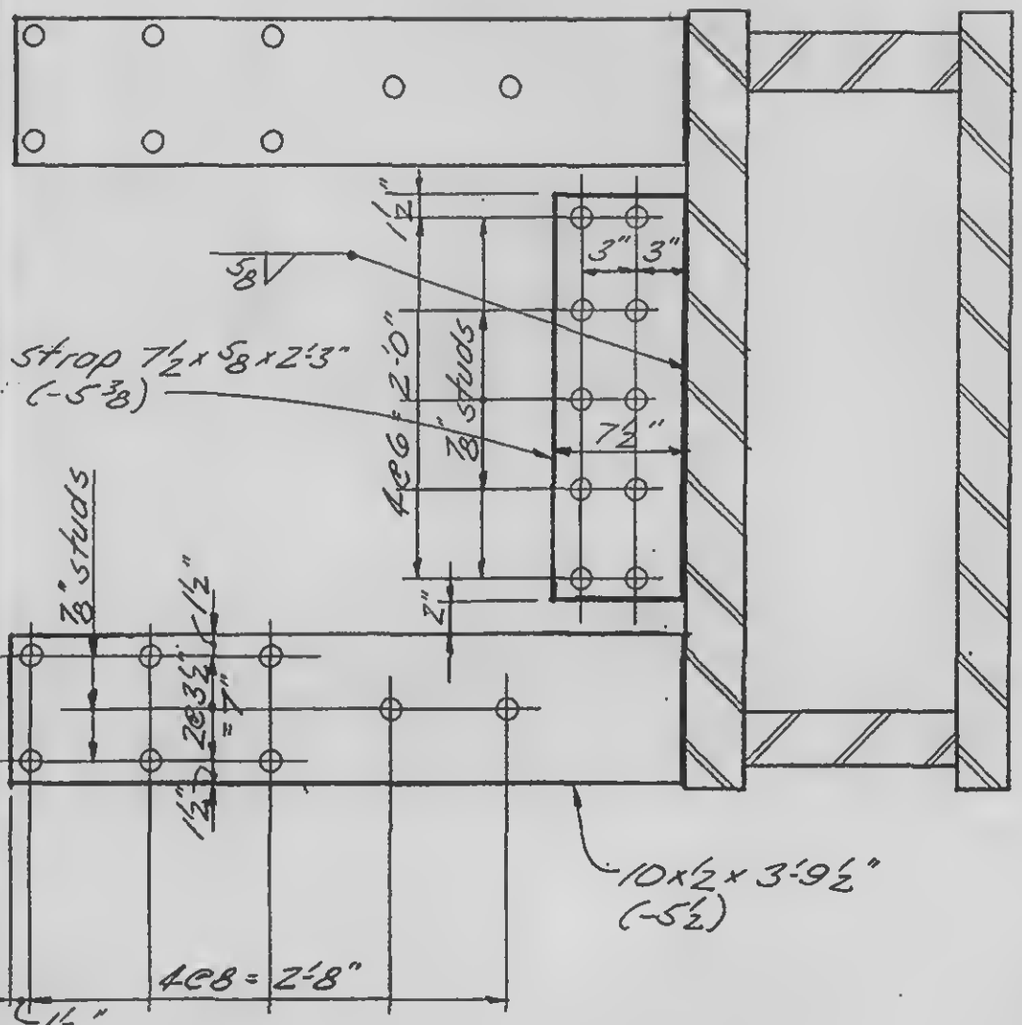
W. Brewer

18-A82-66-2

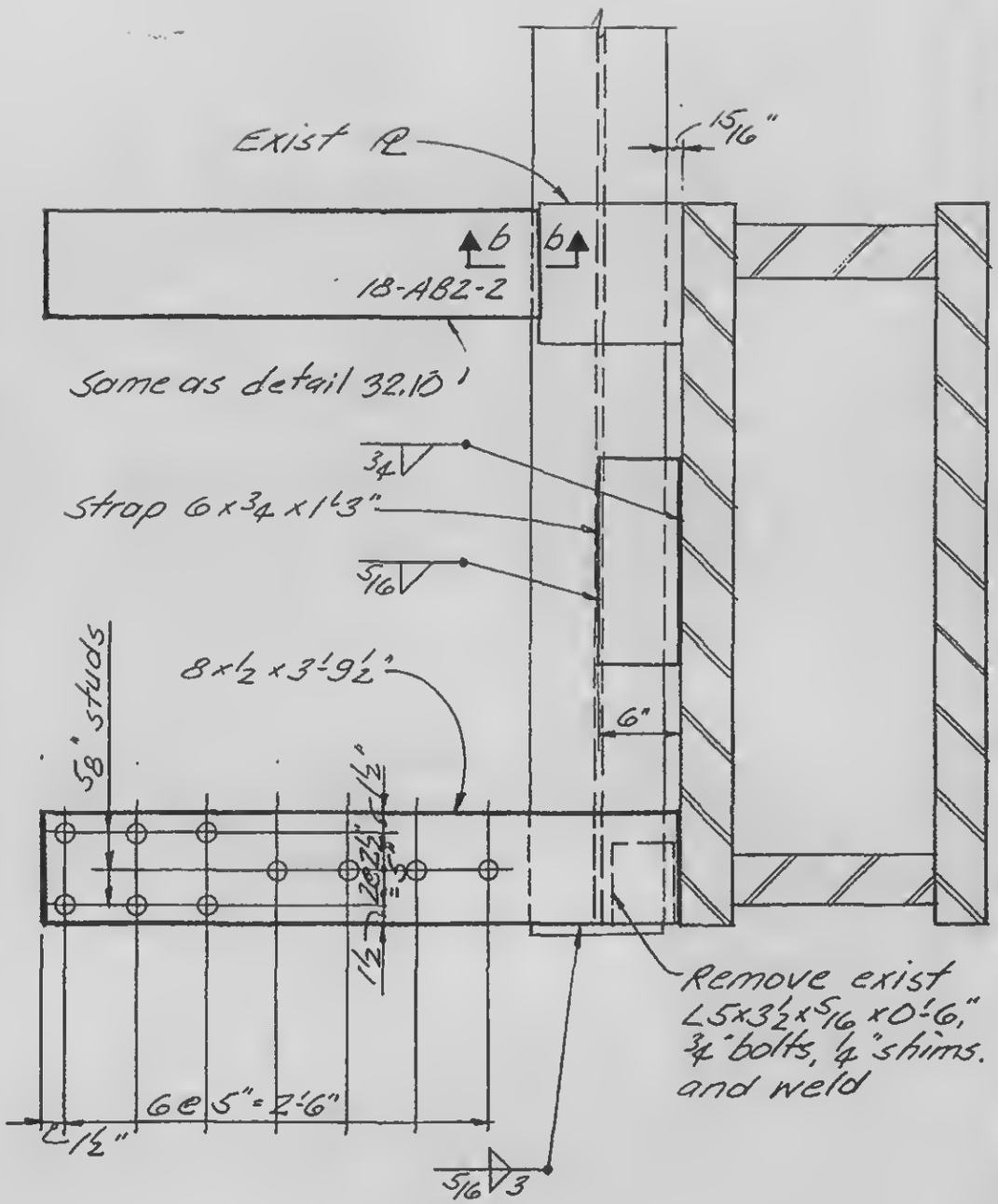
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR - CORE - DETAIL 66 | DATE 4/30/69

REVISIONS



DETAIL 66E



DETAIL 66F

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DRAWN J. Adams

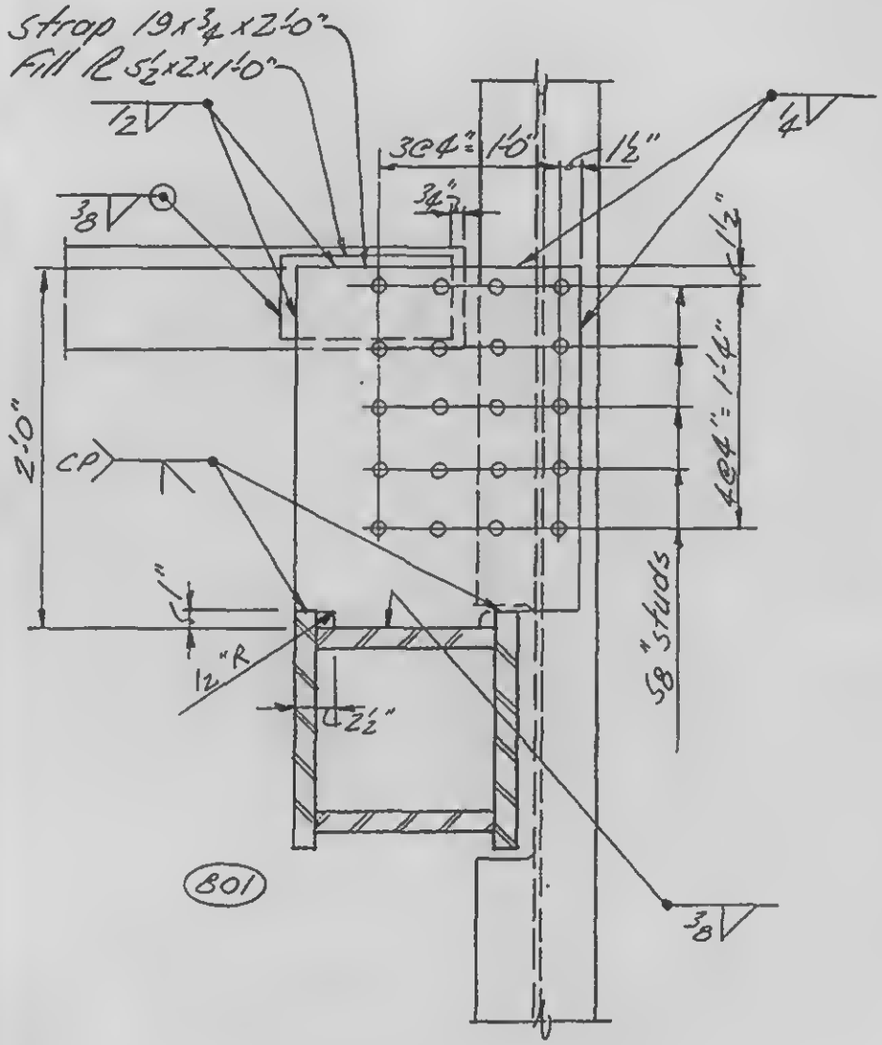
REVIEWED W. Brewer

18-ABZ-66.3

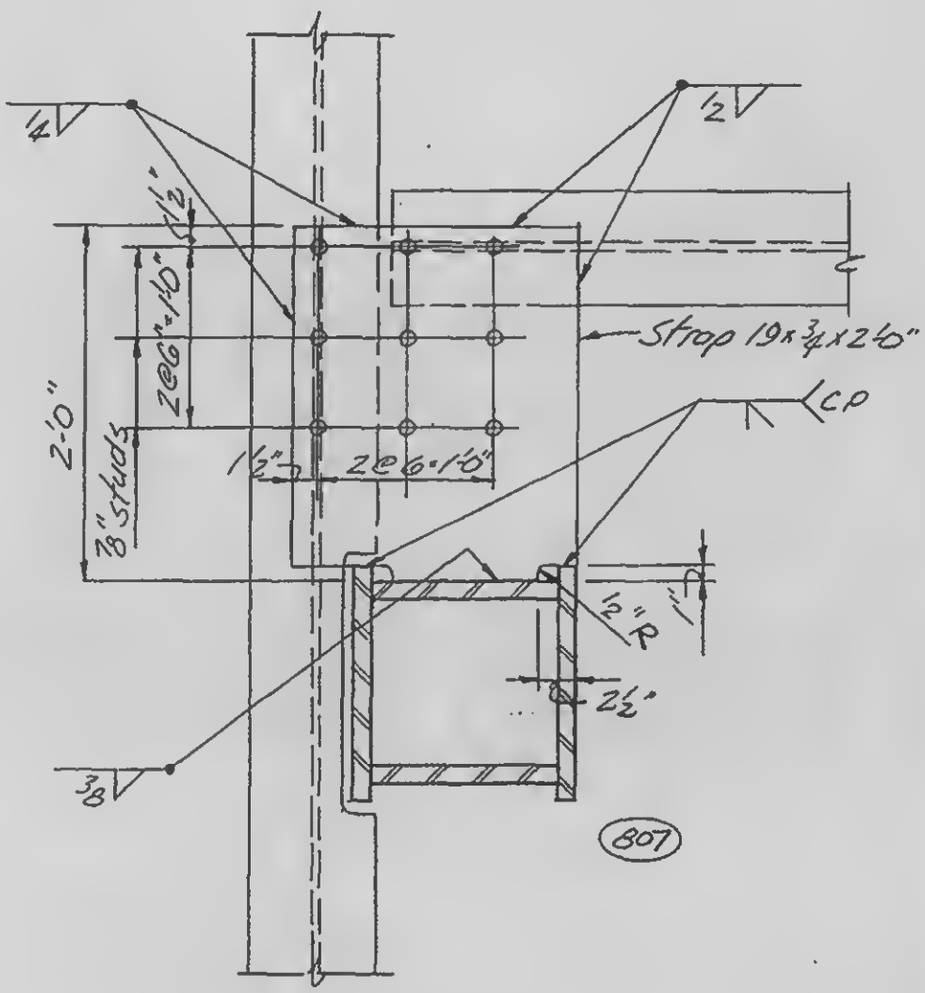
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 67 | DATE 4/30/69

REVISIONS



DETAIL 67A



DETAIL 67B

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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DRAWN J. Adams

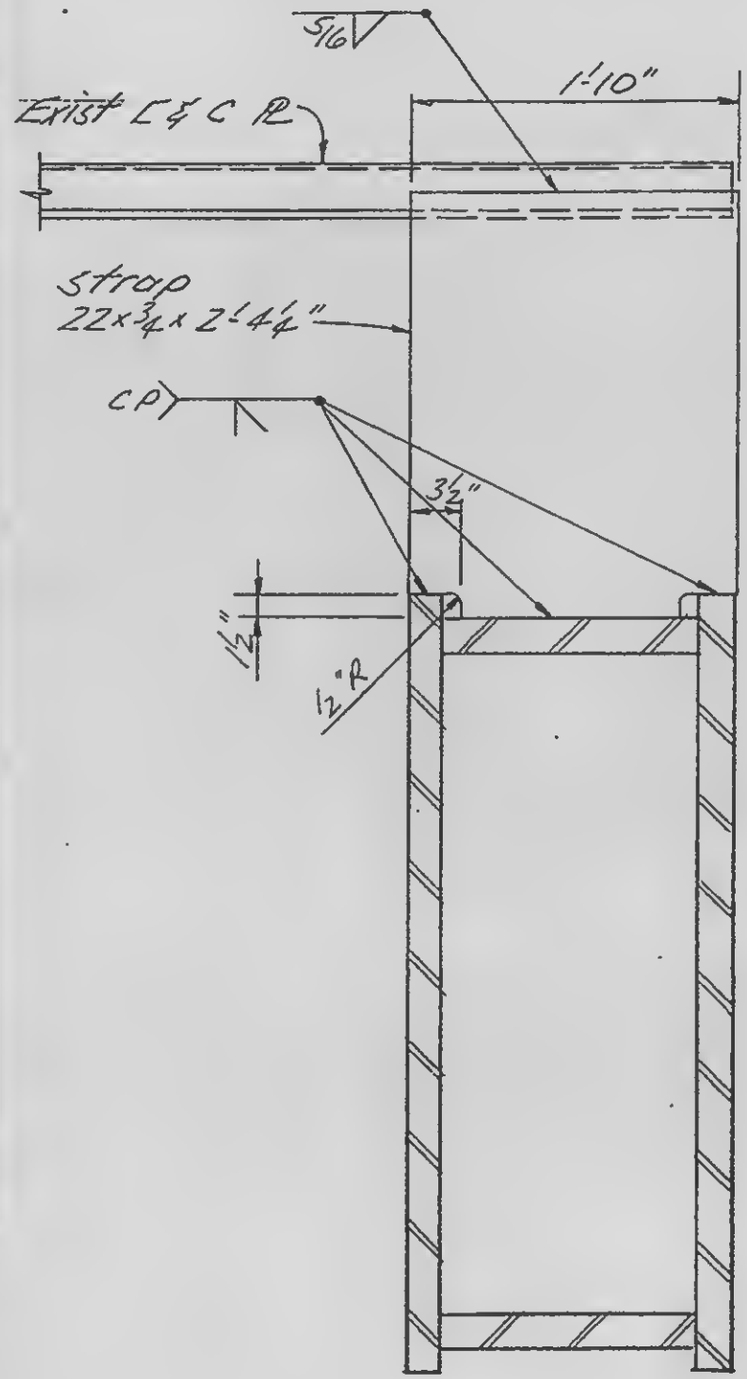
REVIEWED W. Brewer

18-ABZ-67.1

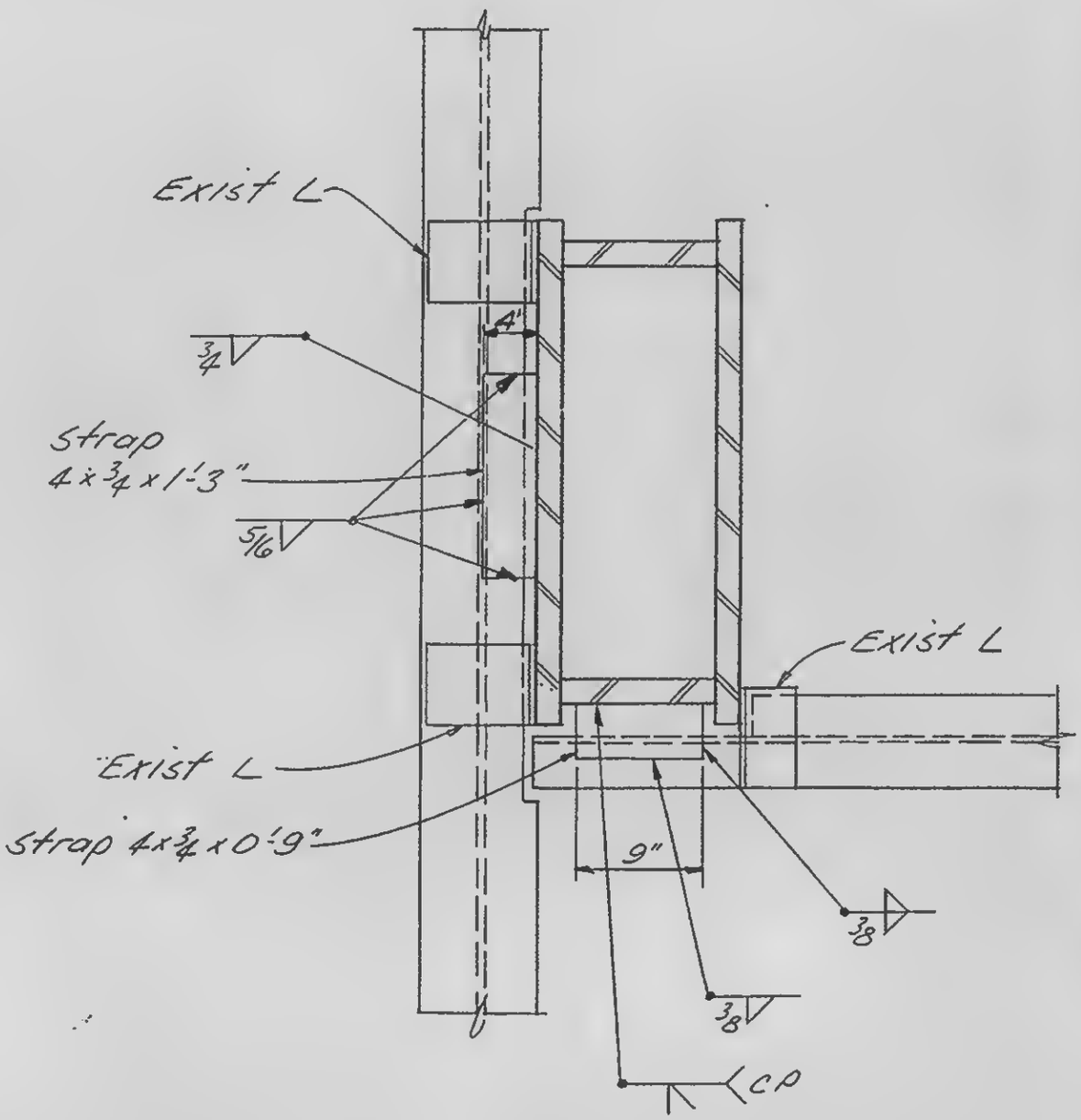
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR - CORE - DETAIL 67 | DATE 4/30/69

REVISIONS



DETAIL 67C



DETAIL 67D

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No. 34360
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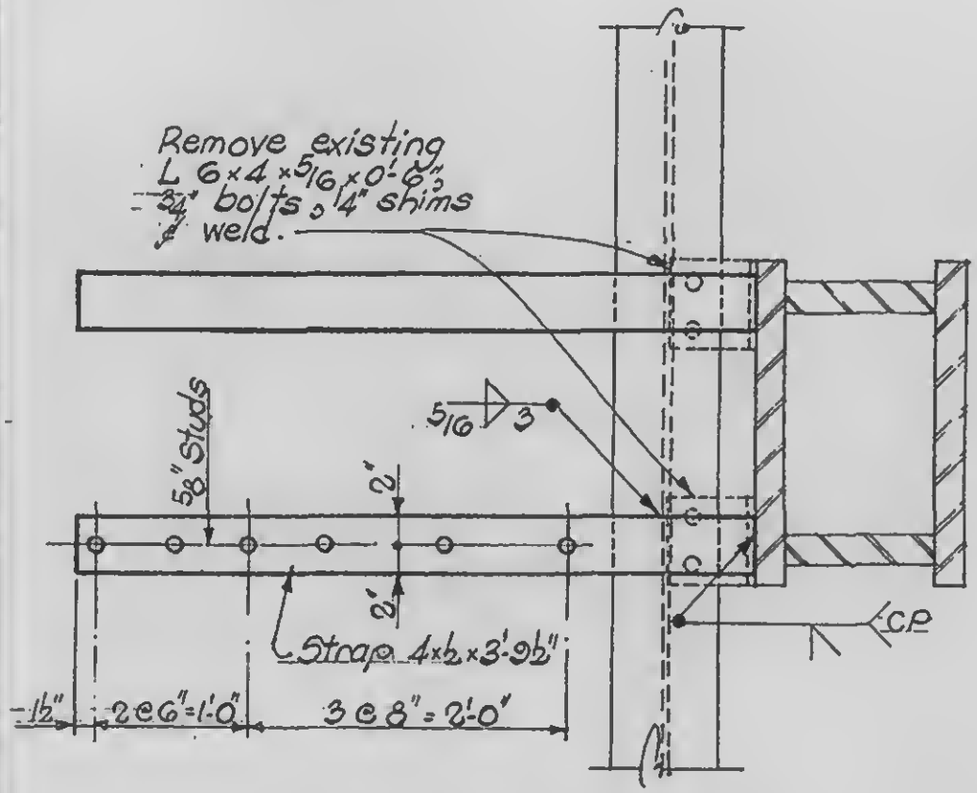
REVIEWED W. Brewer

18-AB2-67.2

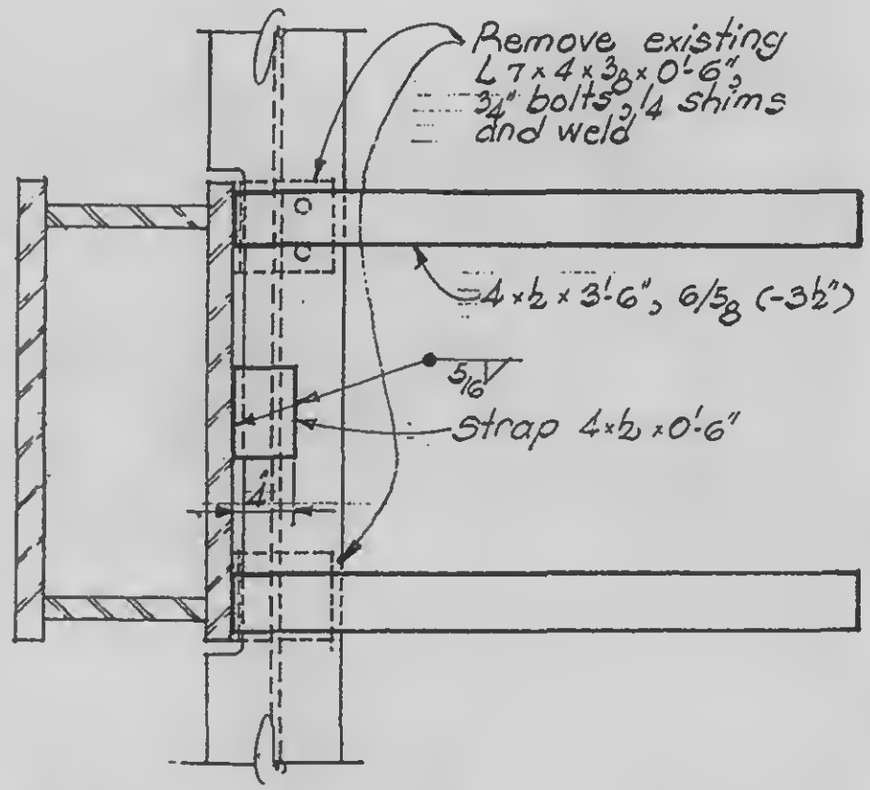
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR CORE DETAIL 68 | DATE 4/30/69

REVISIONS



DETAIL 68A



DETAIL 68B

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED

DRAWN S.T.M.

REVIEWED W. Brewer

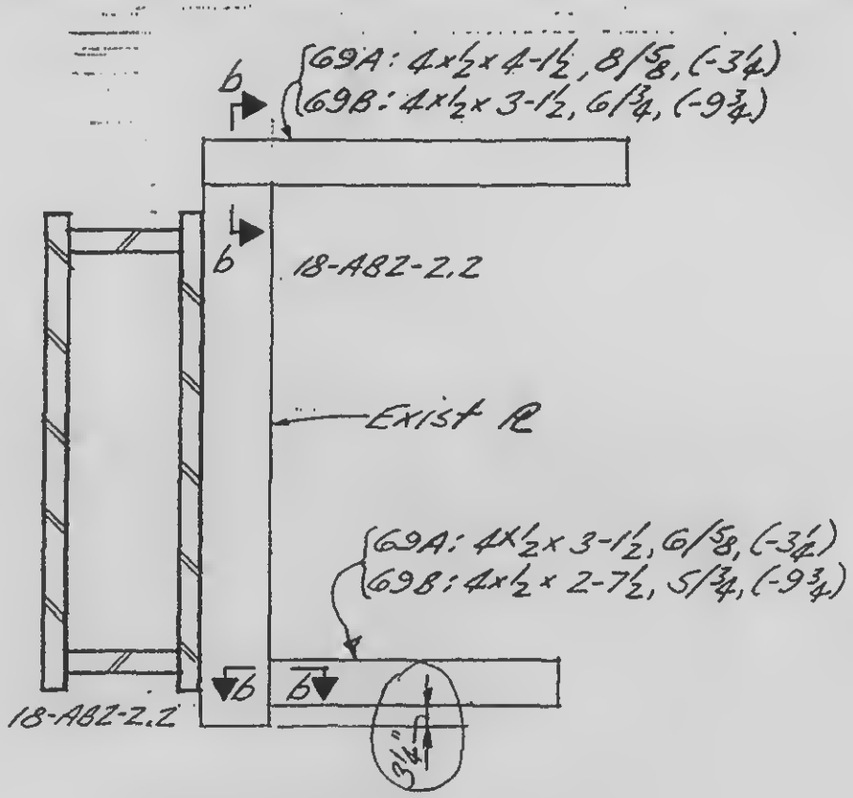
18-AB2-68

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

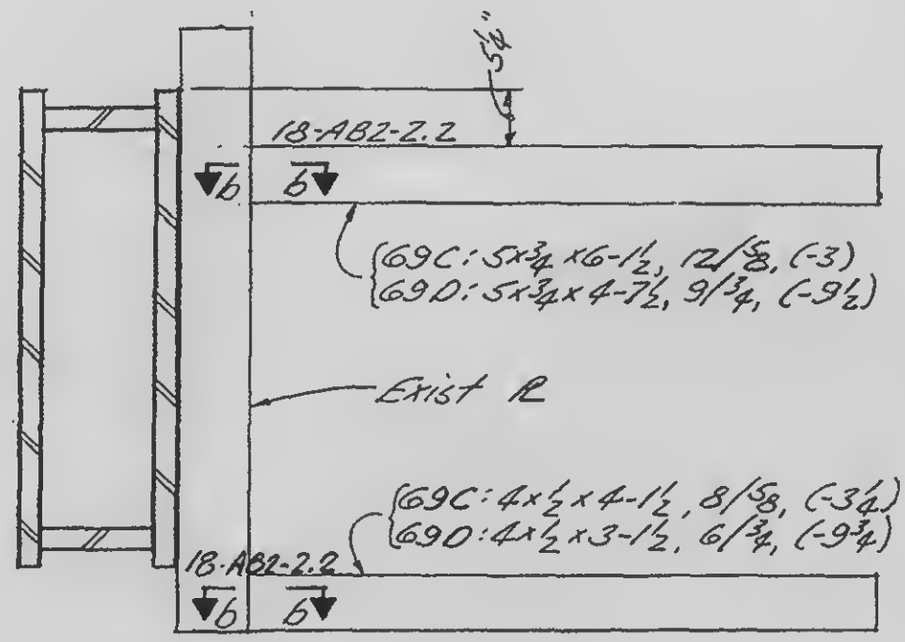
PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 69 | DATE: 5-20-69

REVISIONS

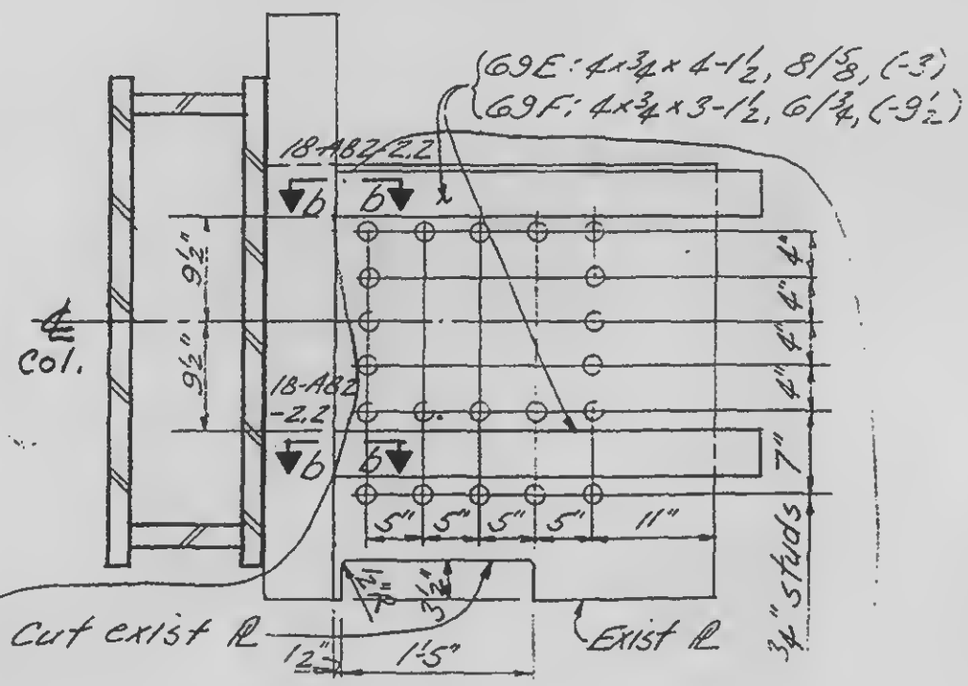
10/1/69



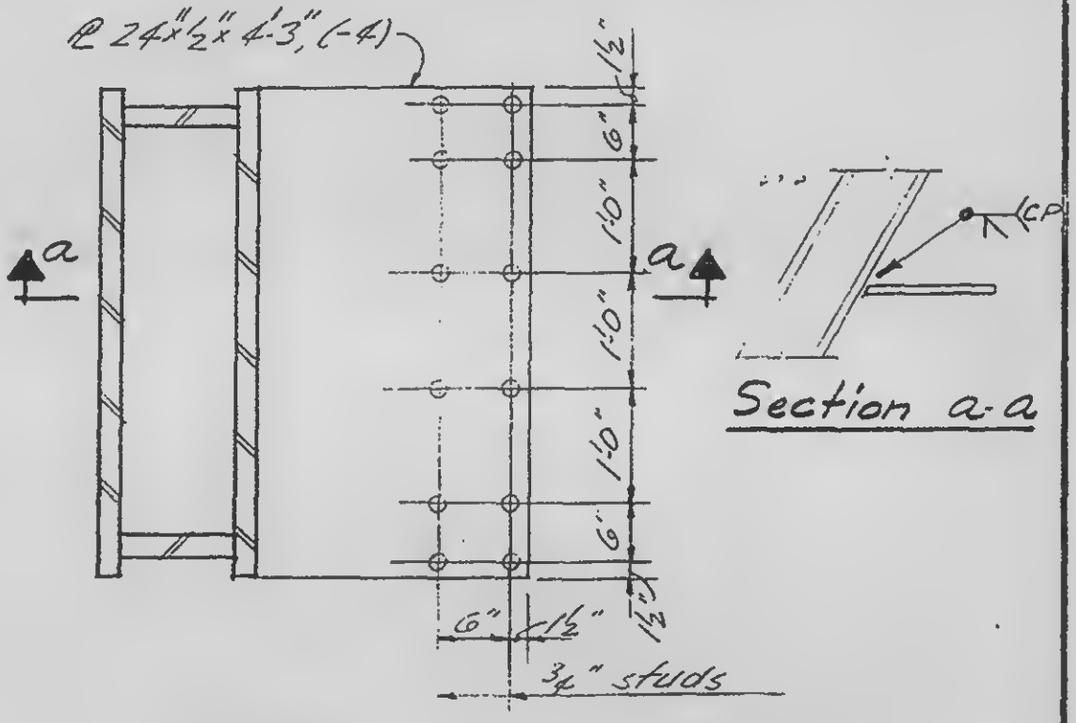
69A & B



69 C & D



69 E & F



69G

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LESLIE E. ROBERTSON
No. 34360
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DRAWN J.H.Adams

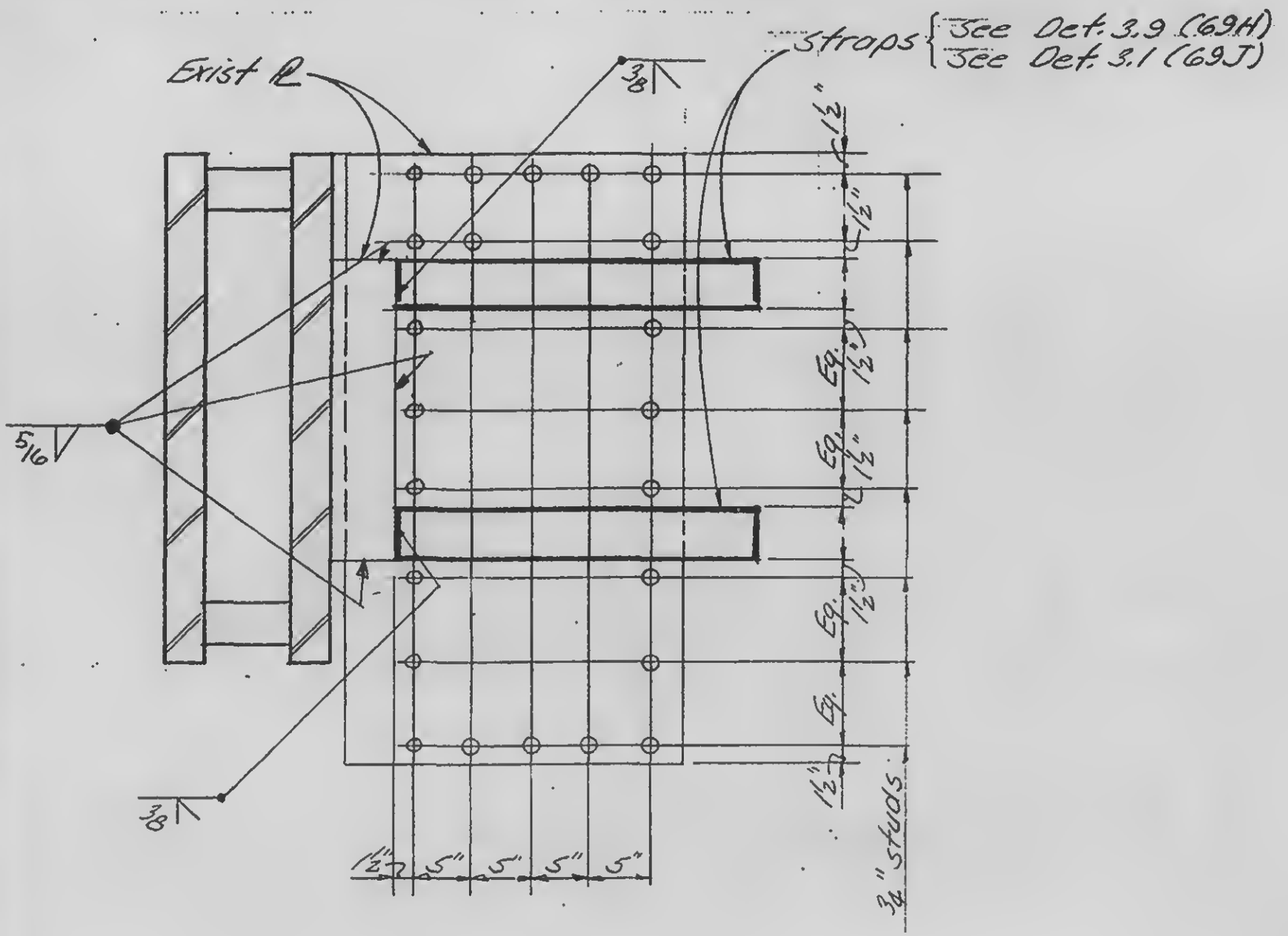
REVIEWED C.W.Brewer

18-ABZ-69.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 69 | DATE: 10-7-69

REVISIONS



Details 69H & 69J

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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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J. Adams

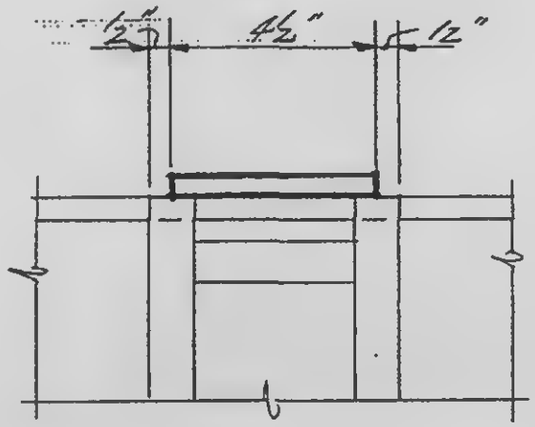
REVIEWED

18-AB2-69.2

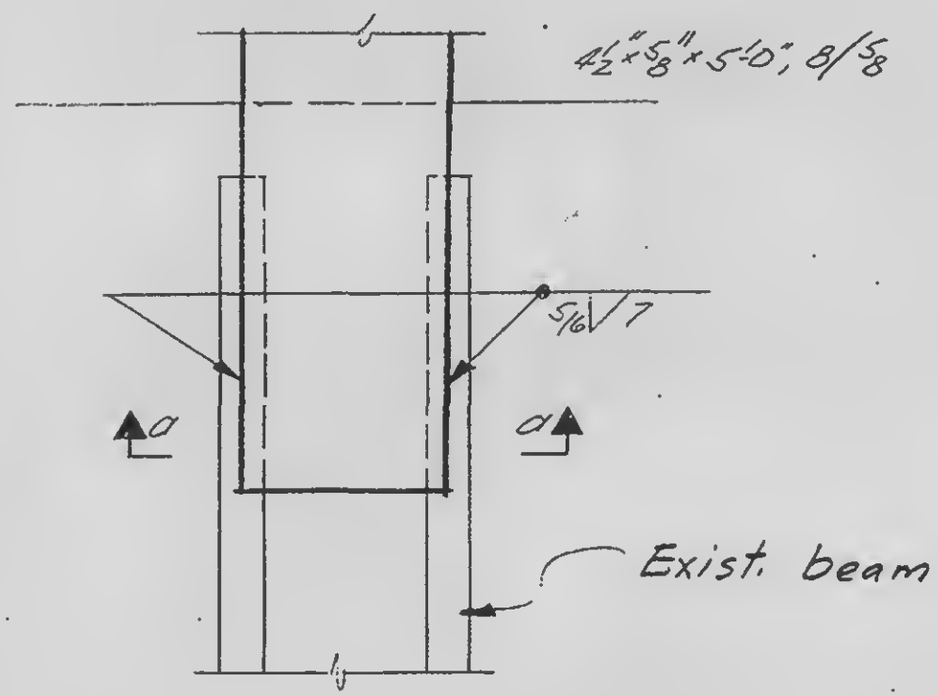
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 70 | DATE: 5-20-69

REVISIONS



Section a-a



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No. 34360
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DRAWN J. Adams

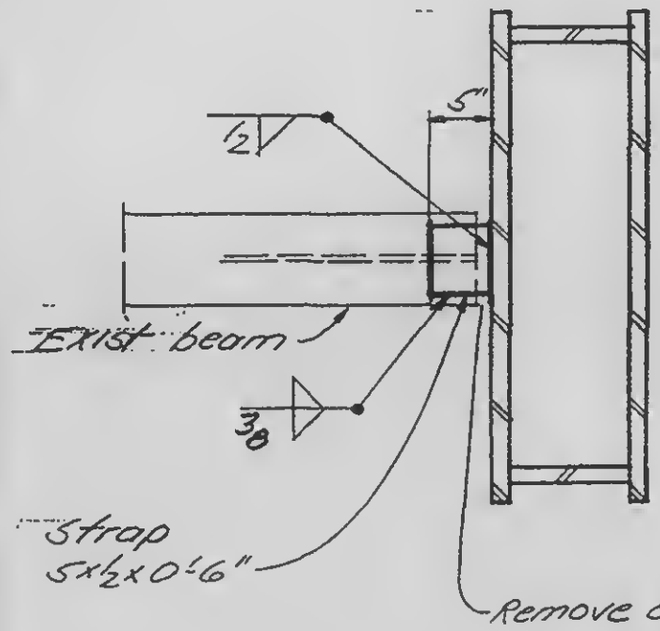
REVIEWED W. Brewer

18-A82-70

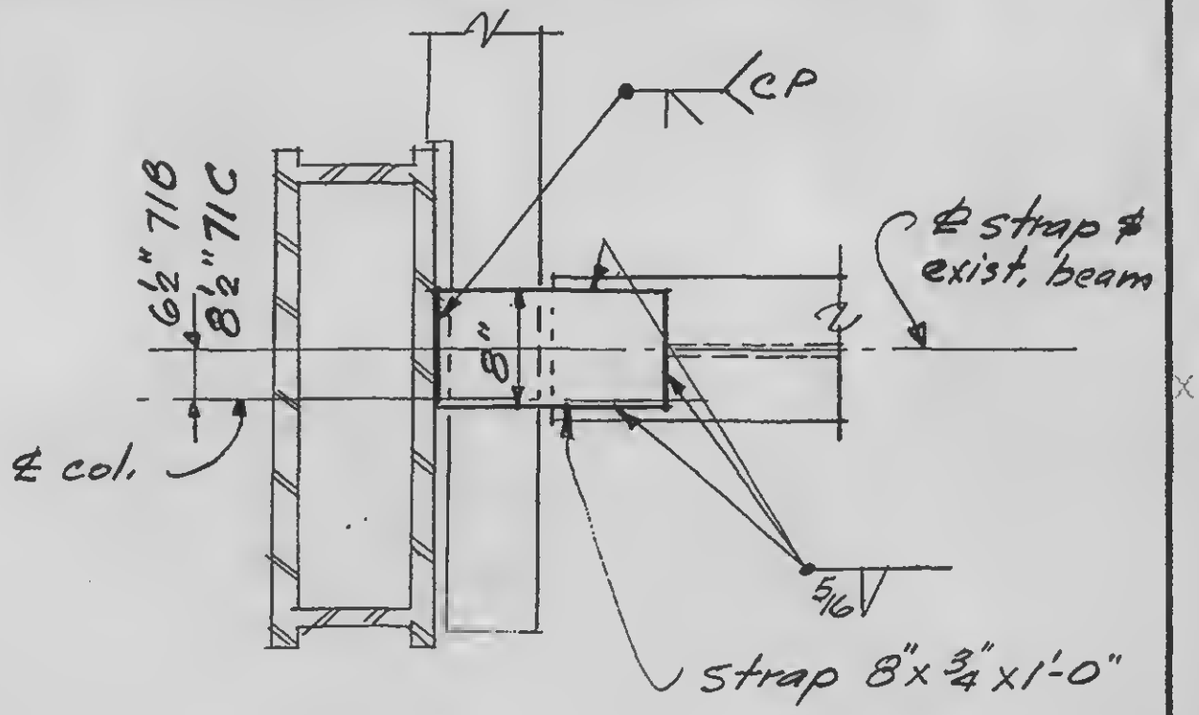
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 71 | DATE: 5-20-69

REVISIONS



71A



71B & C

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LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

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DRAWN
J. Adams

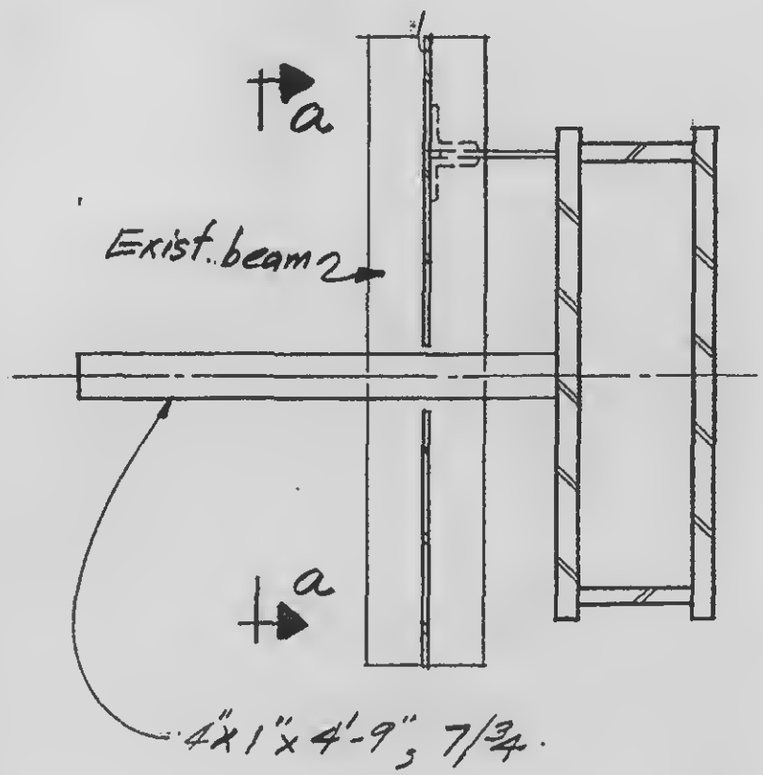
REVIEWED
W. Brewer

18-AB2-71

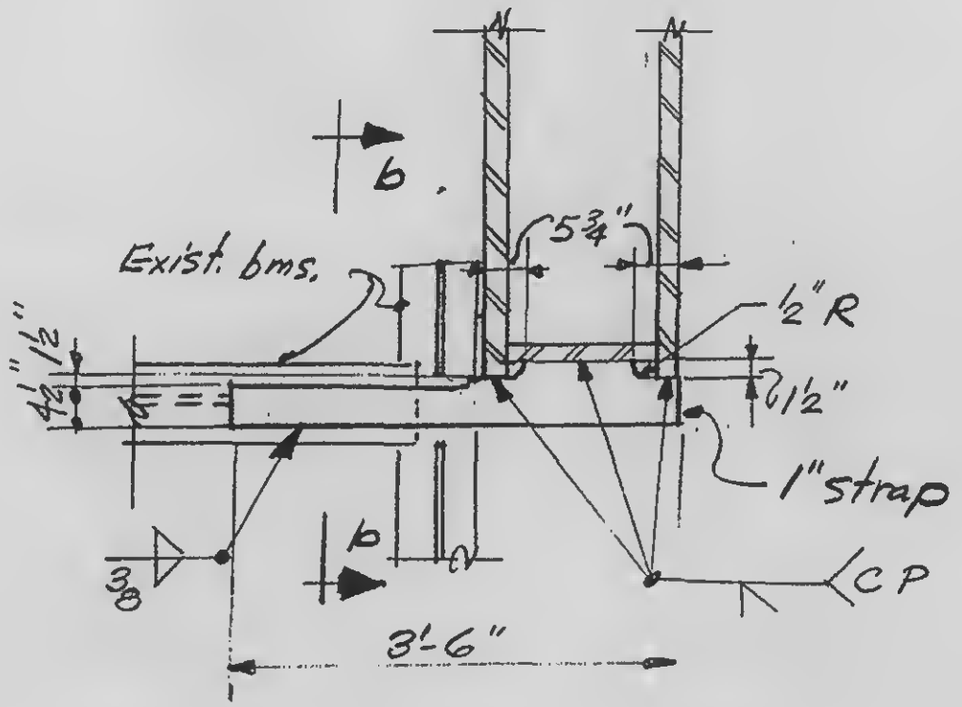
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 72 | DATE: 3-20-69

REVISIONS

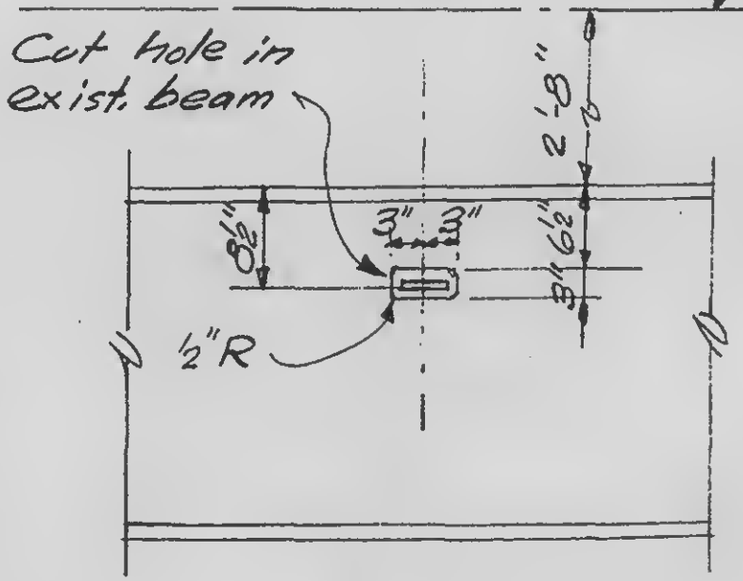


72 A

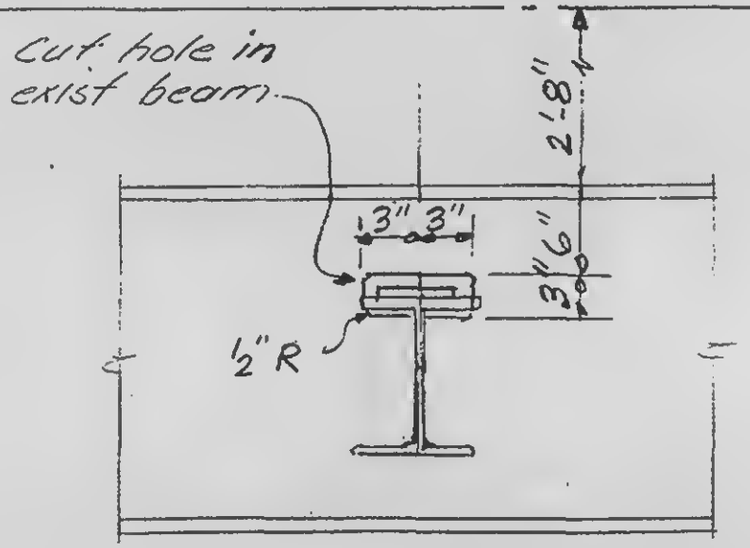


72 B

℄ El. 284'-0"



Section a-a



Section b-b

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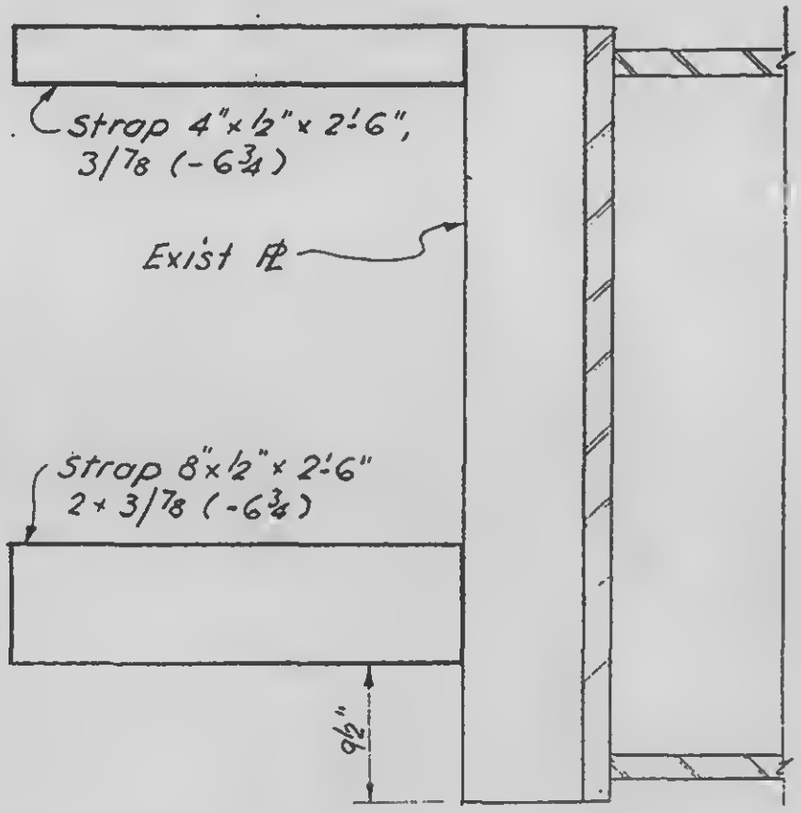
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18-ABZ-72

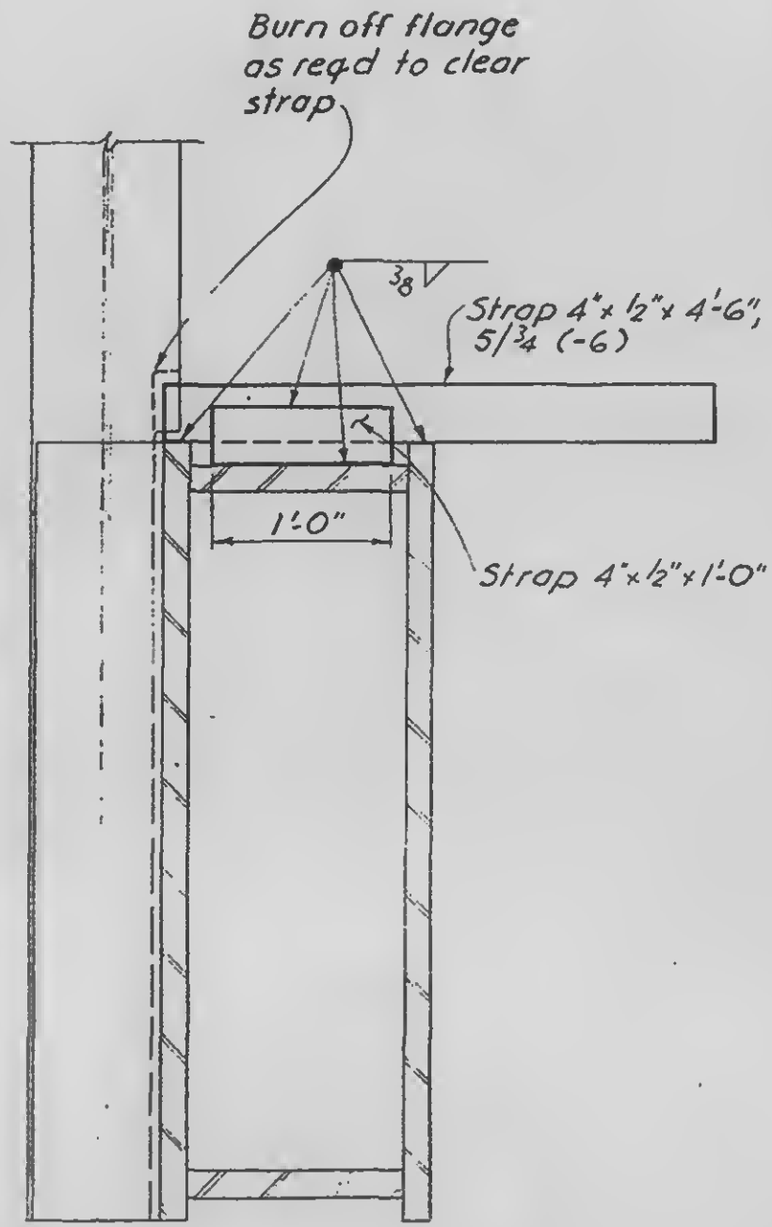
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 73 | DATE: 5-28-69

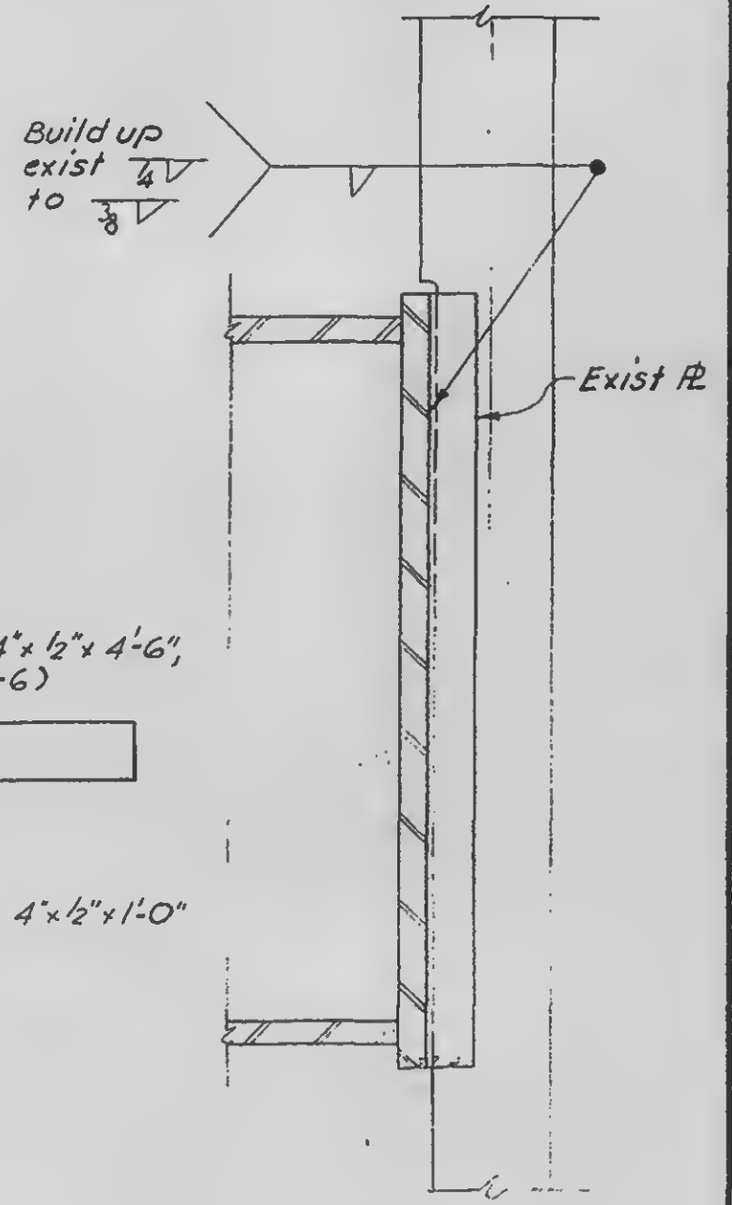
REVISIONS



DETAIL 73 A



DETAIL 73 B



DETAIL 73 C

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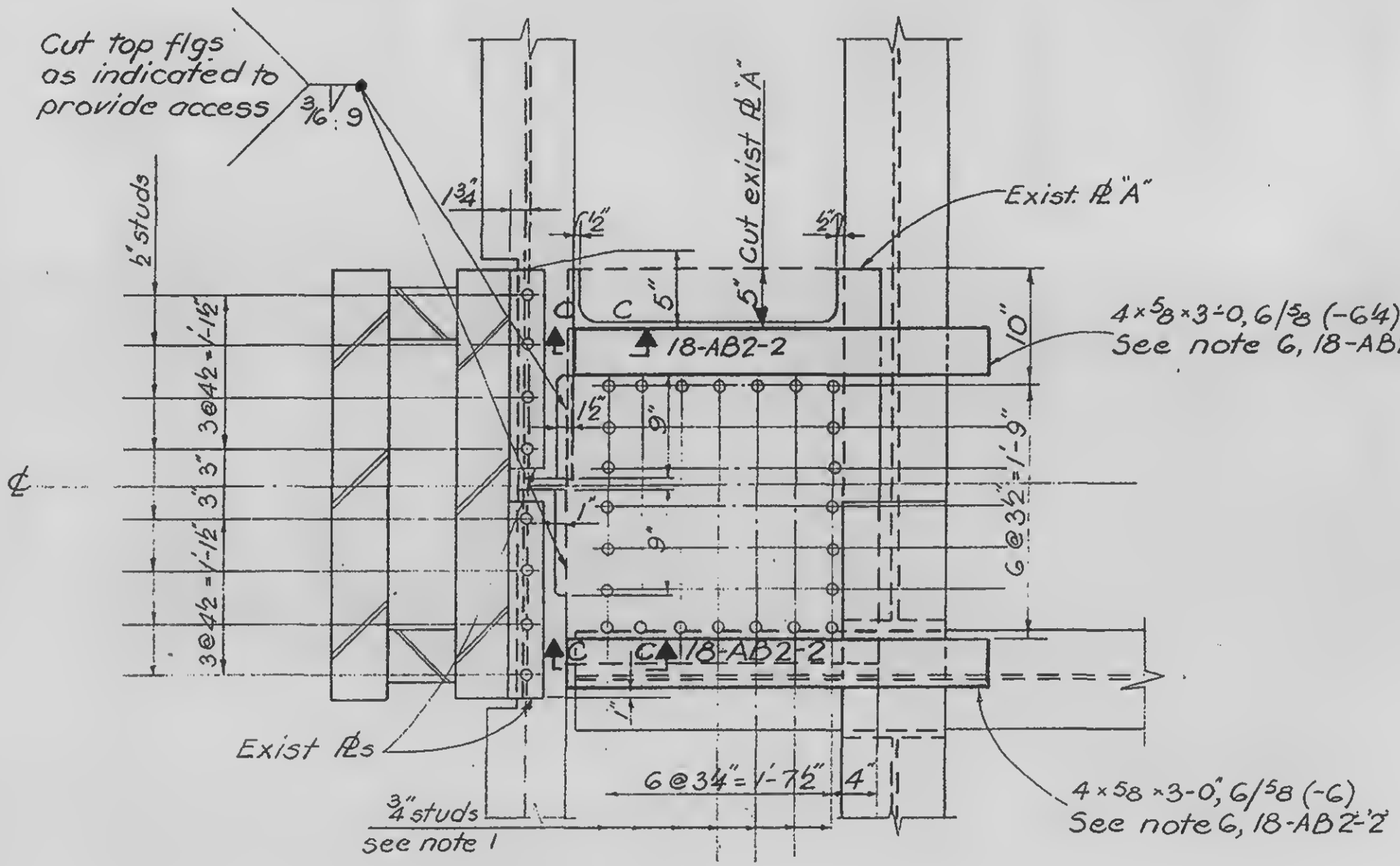
REVIEWED

18-AB2-73

SKILLING HELLE CHRISTIANSEN ROBERTSON | Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHORS - CORE - DETAIL 74 | DATE 10-1-69

REVISIONS



DETAIL 74A

Note 1. Studs to be place on exist ℄ "A" prior to installation of straps

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DRAWN
D.C. Huggins

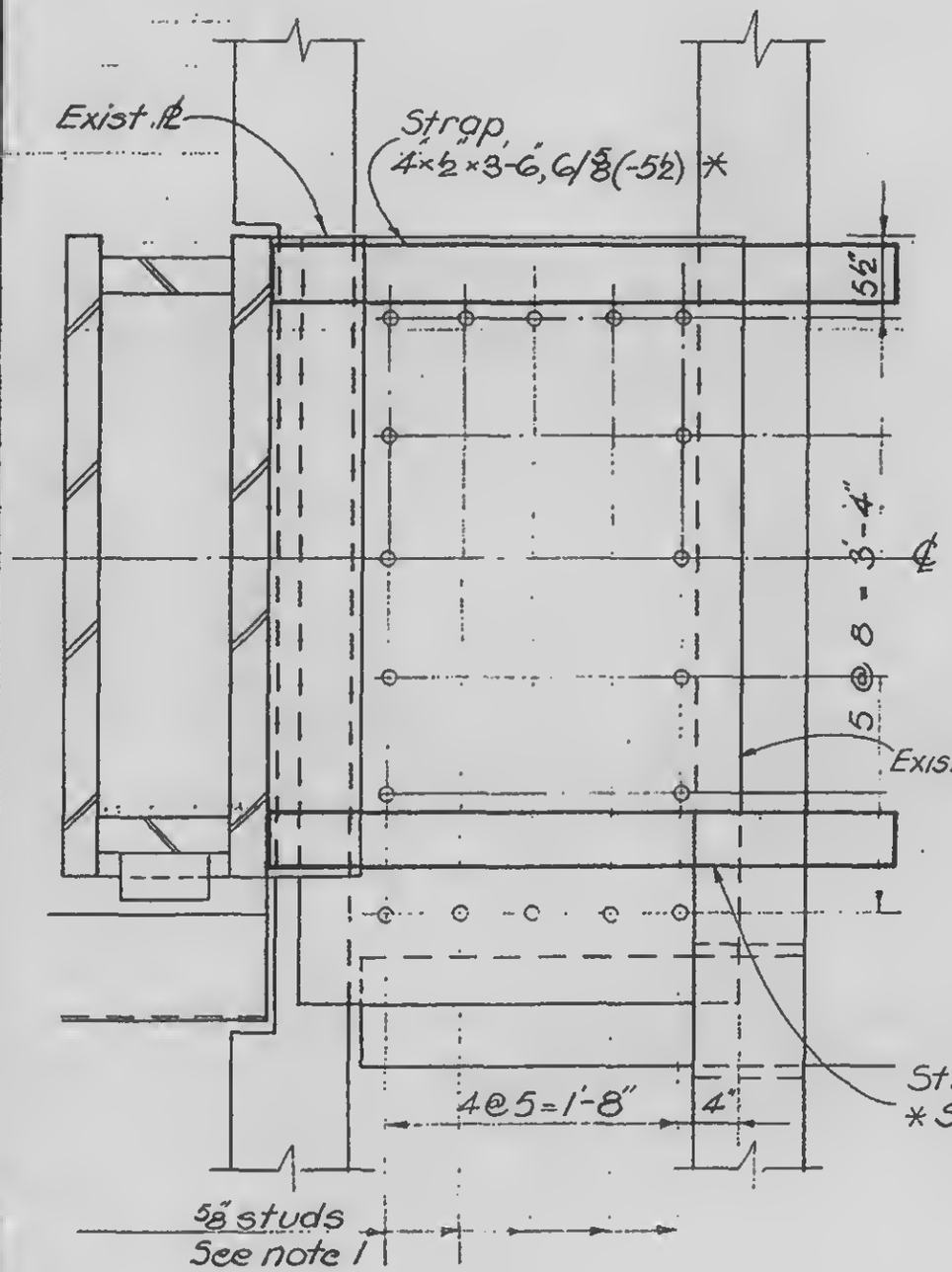
REVIEWED

18-AB2-74.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

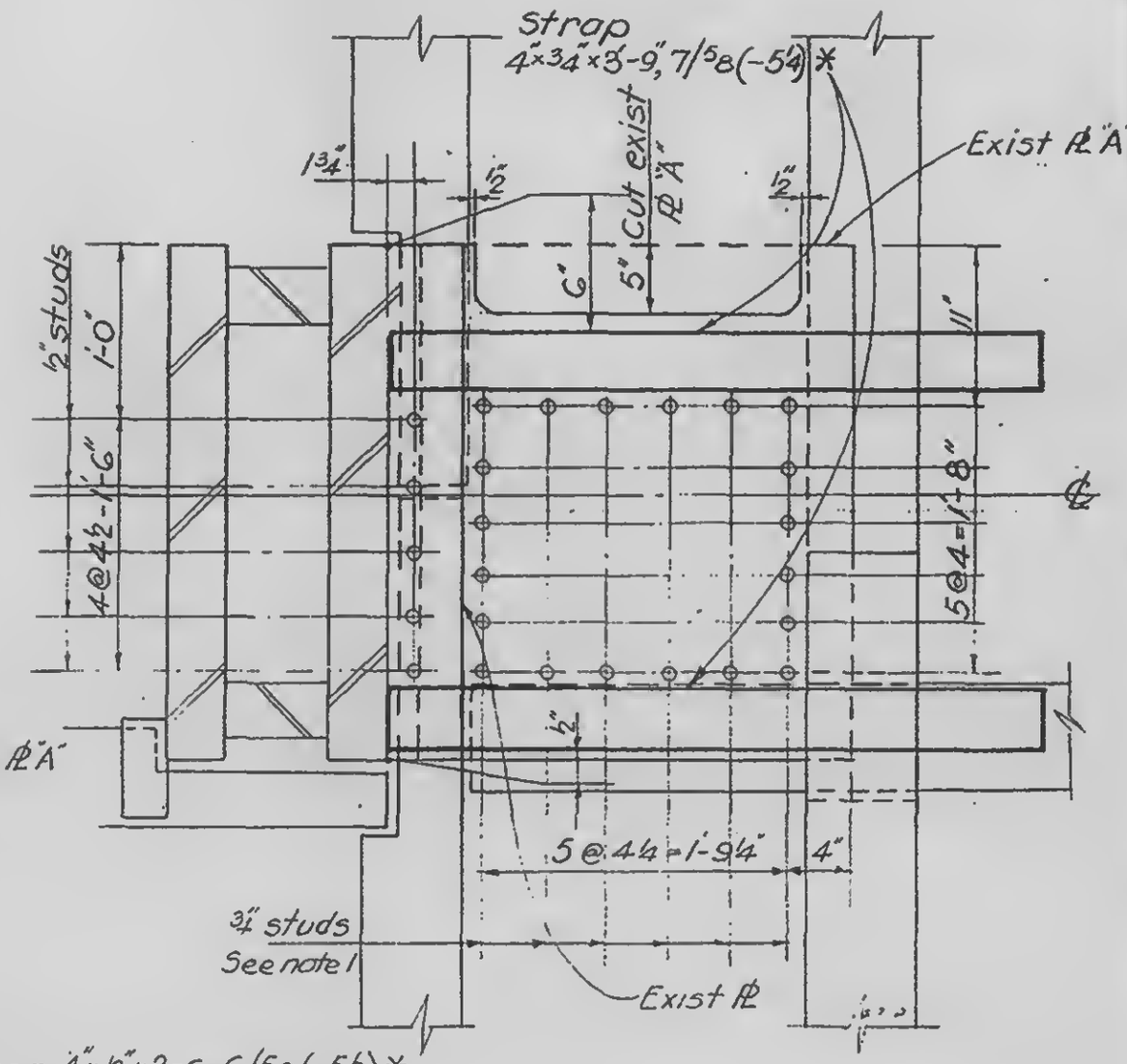
PROJECT THE WORLD TRADE CENTER | TITLE STRAP ANCHOR-CORE DETAIL 74 | DATE 10-1-69

REVISIONS



DETAIL 74B

Note 1 Studs to be place on existing ℄ A prior to installation of straps



DETAIL 74C

Note 1 Studs to be place on exist ℄ "A" prior to installation of straps

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L. J. Huggins

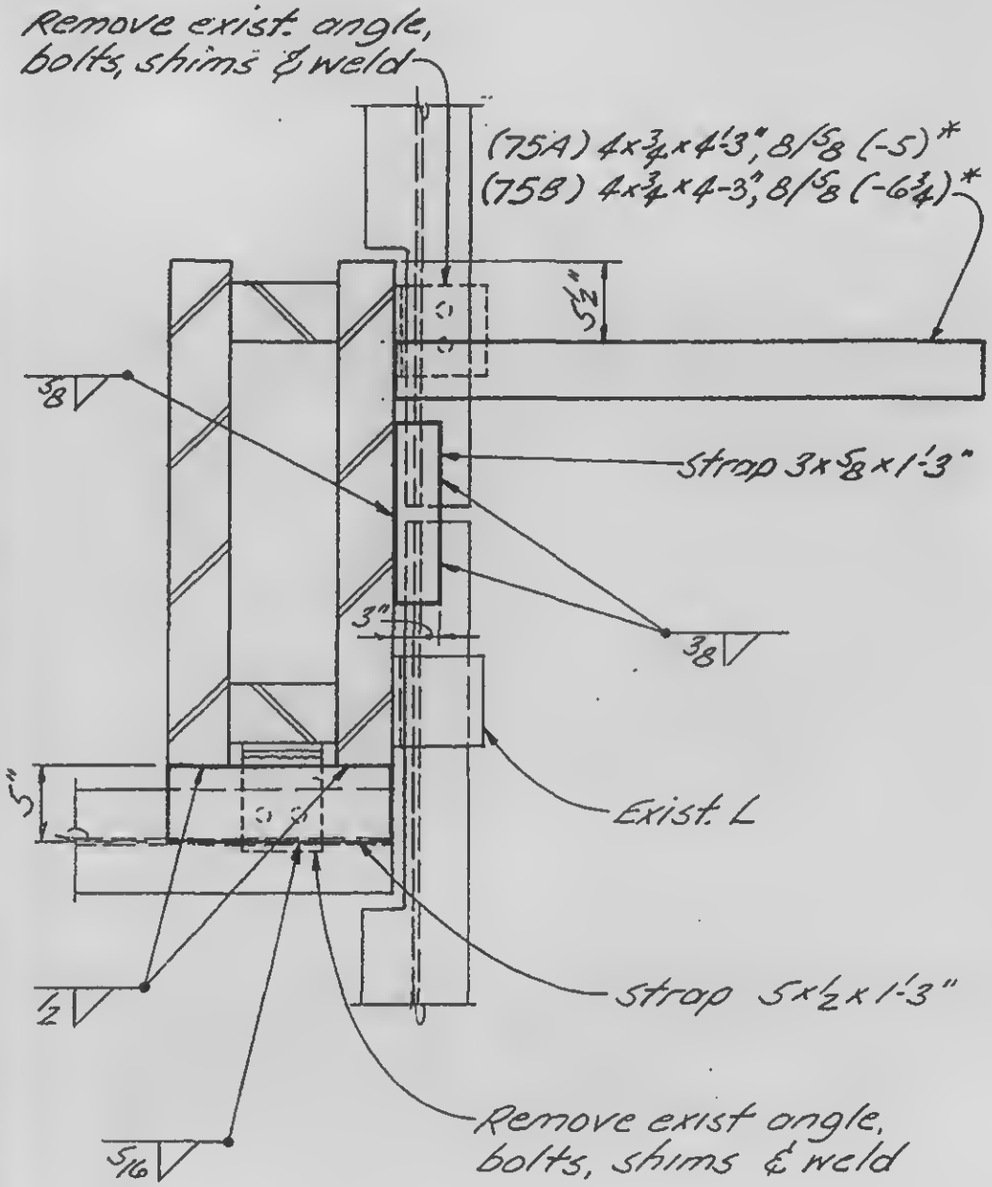
REVIEWED

18-AB2-74.2

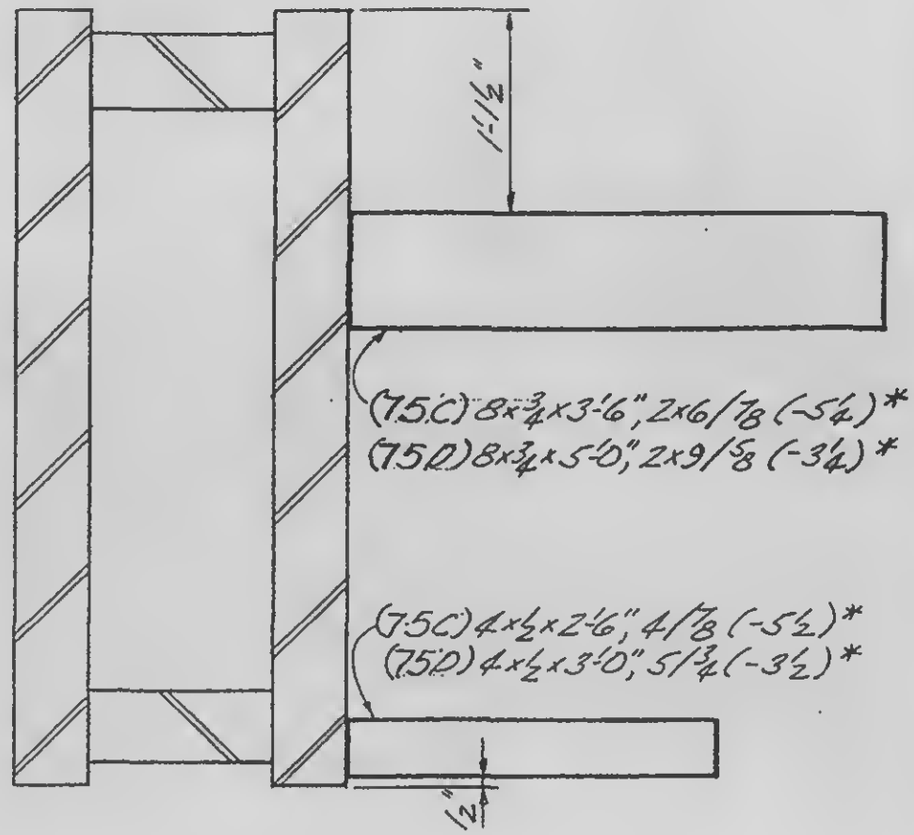
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 75 | DATE: 10-1-69

REVISIONS



Details 75A and 75B



Details 75C and 75D

*See Note 6, 18-ABZ-2

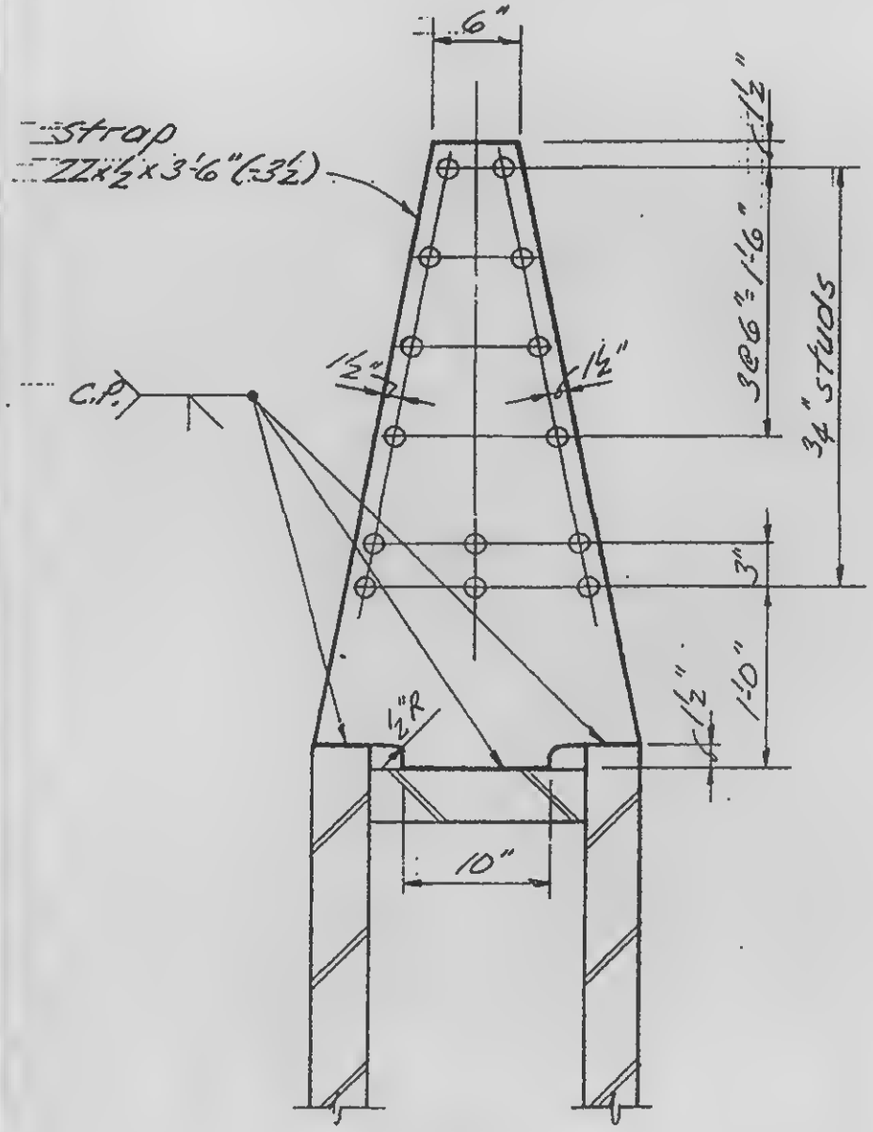
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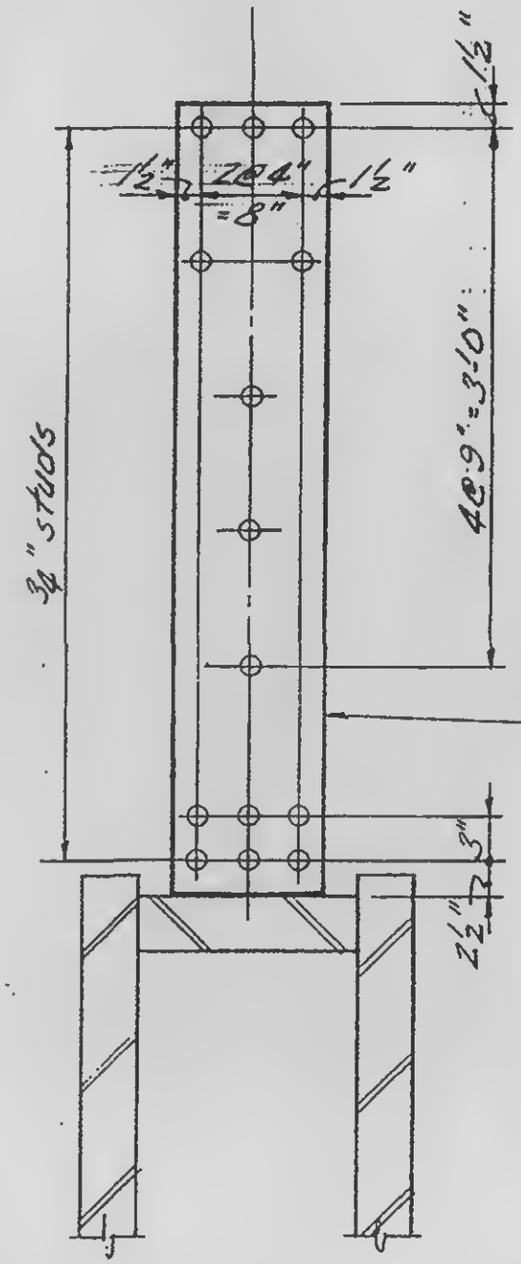
DRAWN
J. Adams

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18-ABZ-75



Detail 76A



Detail 76B

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LESLIE E. ROBERTSON
No. 34360
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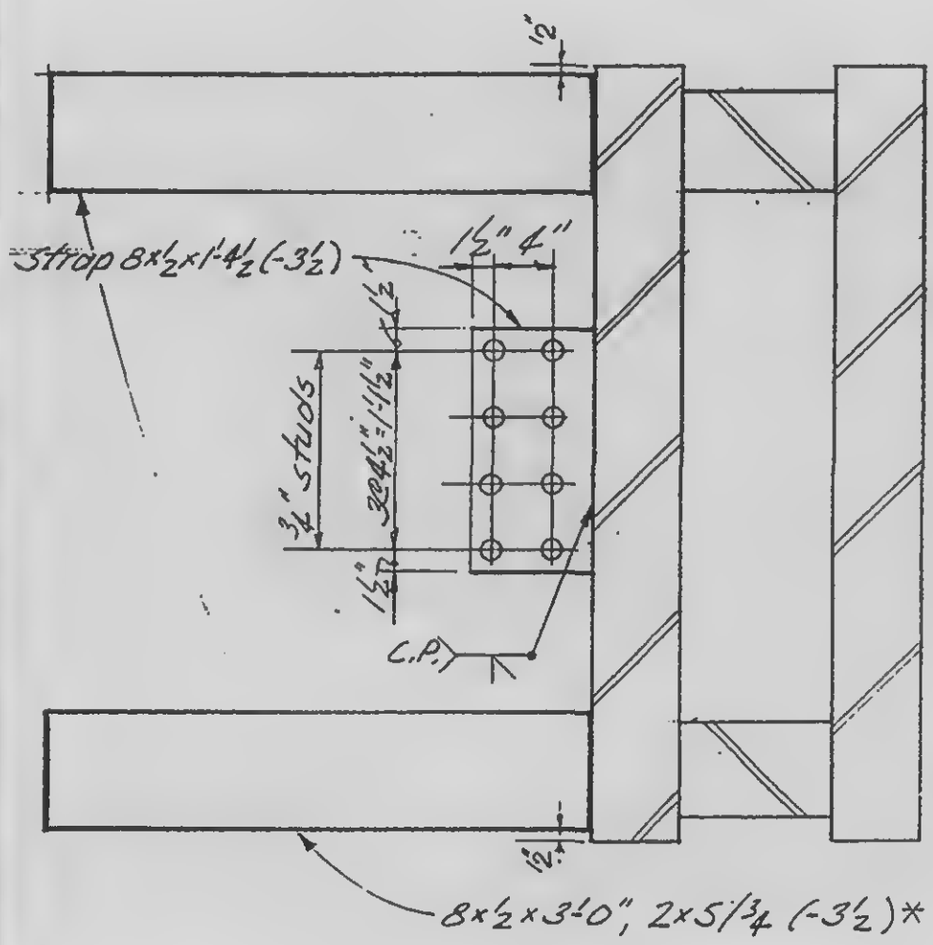
DESIGNED
DRAWN
J.r.adams
REVIEWED

18-AB2-76

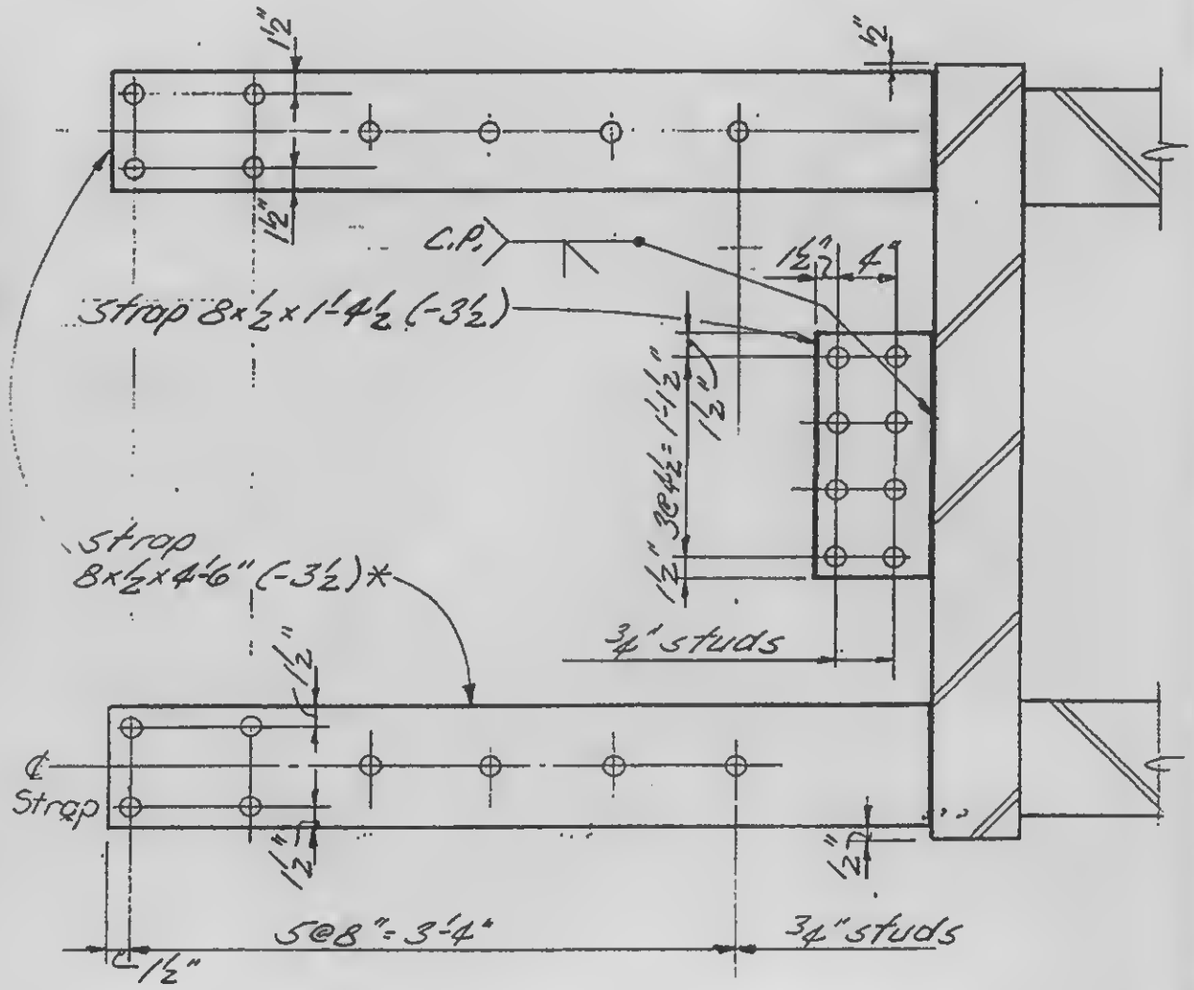
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL II | DATE: 10-1-69

REVISIONS



Detail 77A



Detail 77B

* See Note 6
18-AB2-2

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No. 34960
UNIVERSITY OF THE STATE OF NEW YORK

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DRAWN
J. Adams

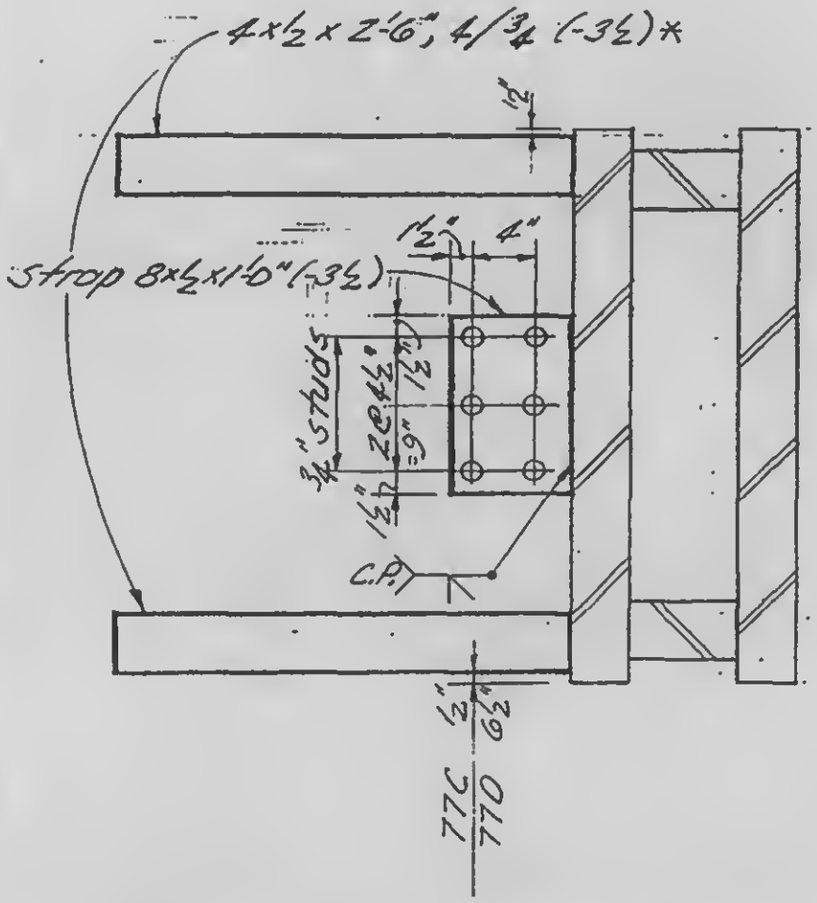
REVIEWED

18-AB2-77.1

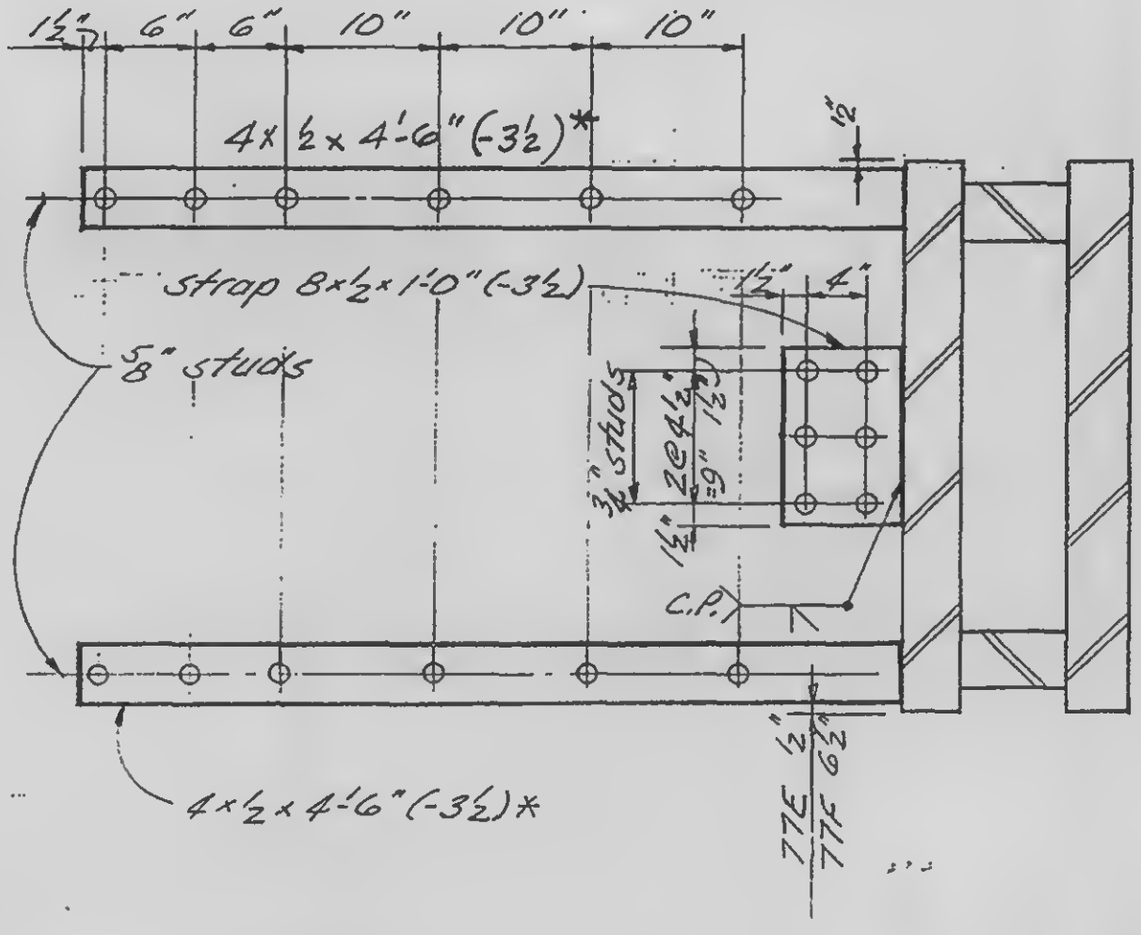
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHOR - CORE - DETAIL 77 | DATE: 10-1-69

REVISIONS



Details 77C and 77D



Details 77E and 77F

See Note 6
18-AB2-2

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No. 34360
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DRAWN
J. Adams

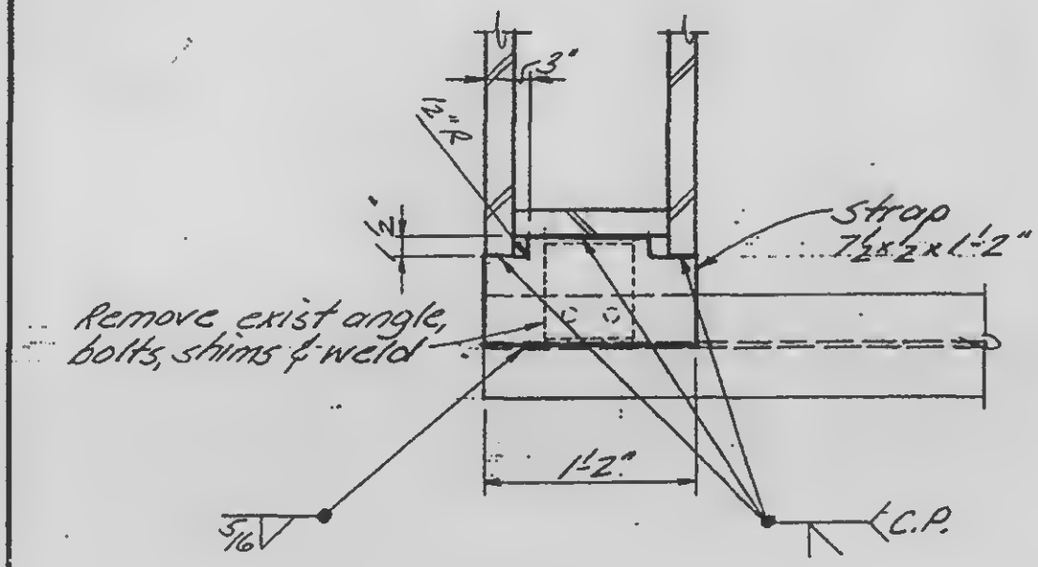
REVIEWED

18-AB2-77.2

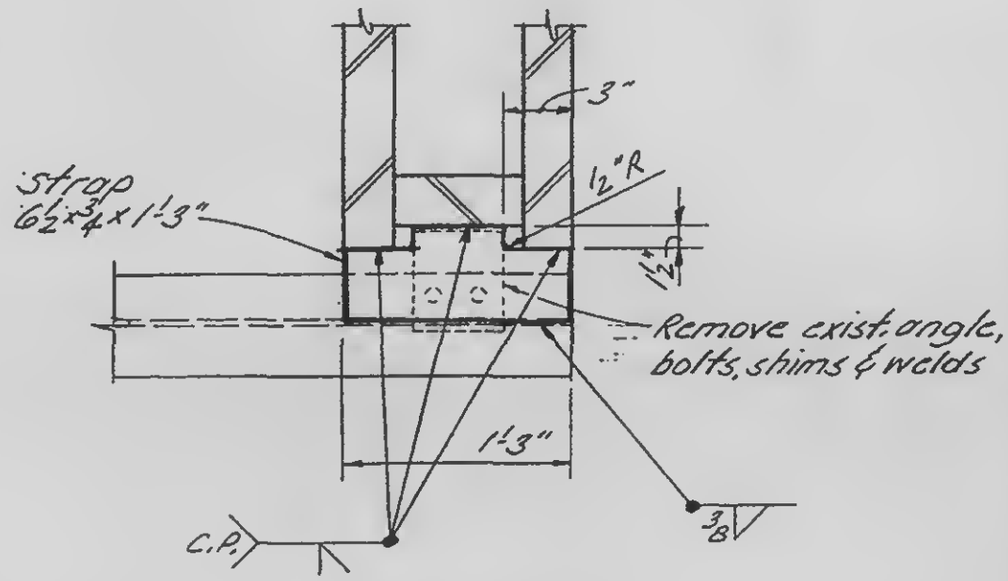
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 78 | DATE: 10/1/69

REVISIONS



Detail 78A



Detail 78B

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No. 34360
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J. Ellis

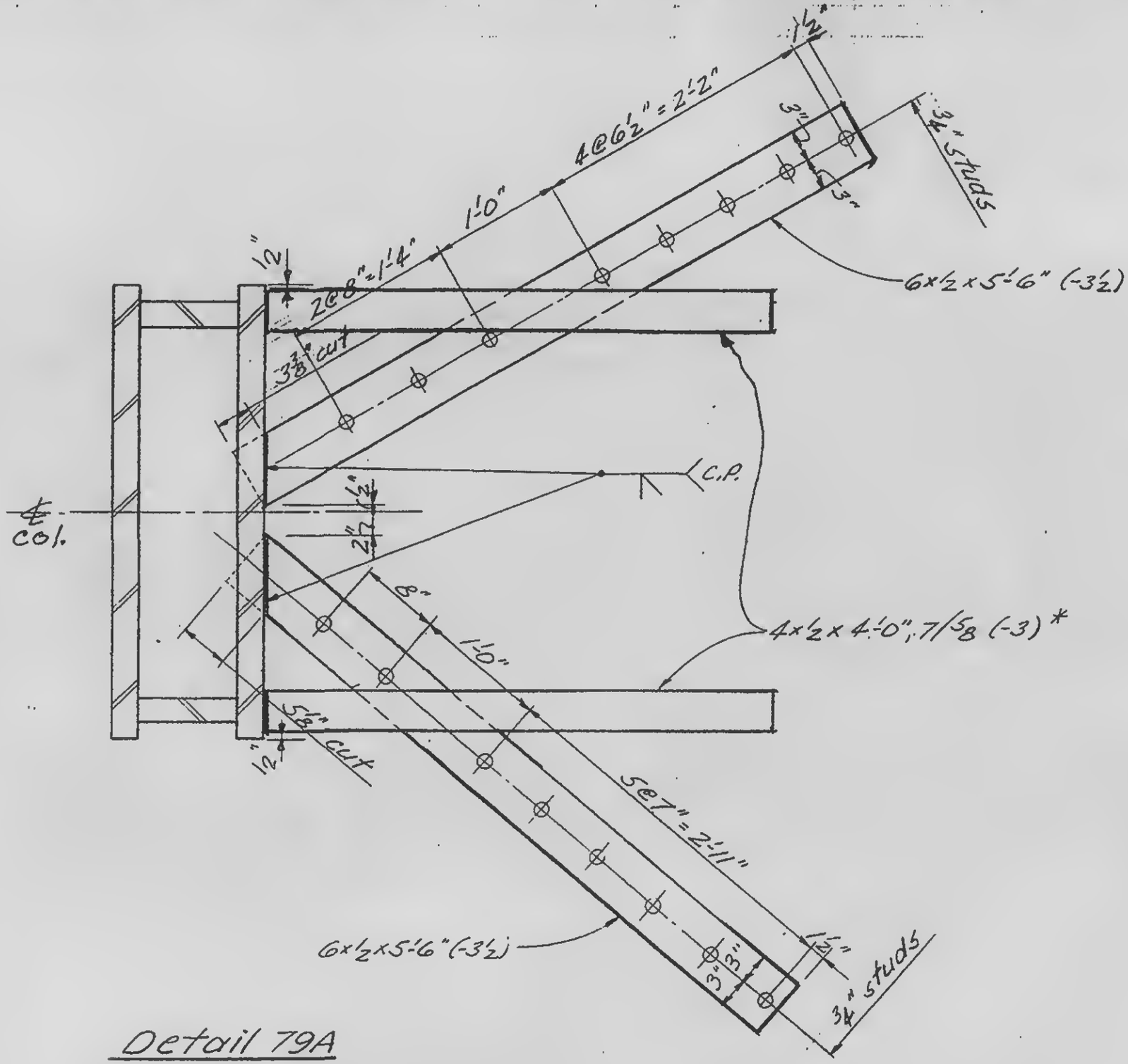
REVIEWED

18-A82-78

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 79 | DATE: 10-1-69

REVISIONS



Detail 79A

* See Note 6, 18-ABZ-2.

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Adams

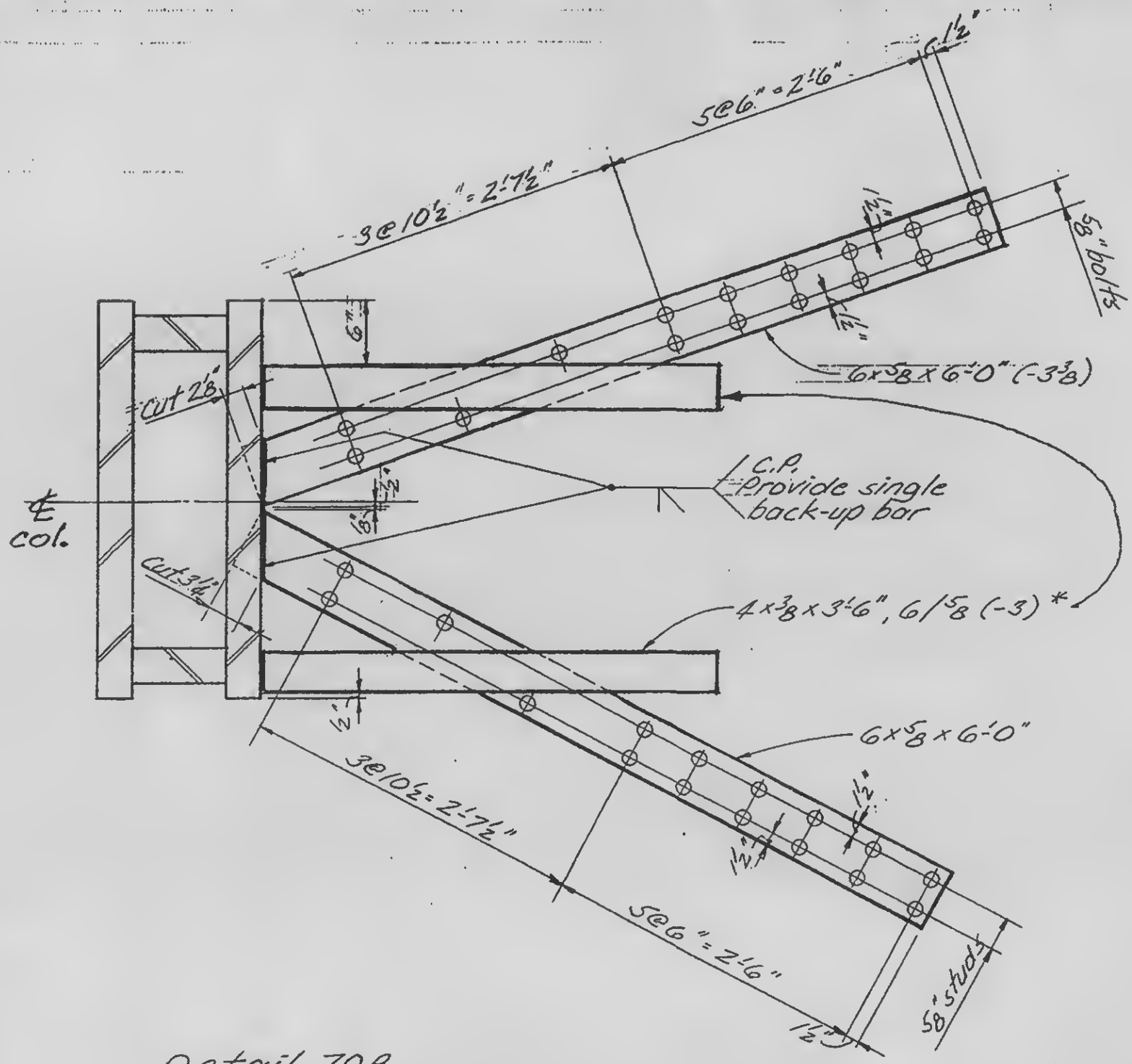
REVIEWED

18-ABZ-79.1

SKILLING HELLE CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 79 | DATE: 10-16-69

REVISIONS



Detail 79B

*See Note 6, 18-ABZ-2

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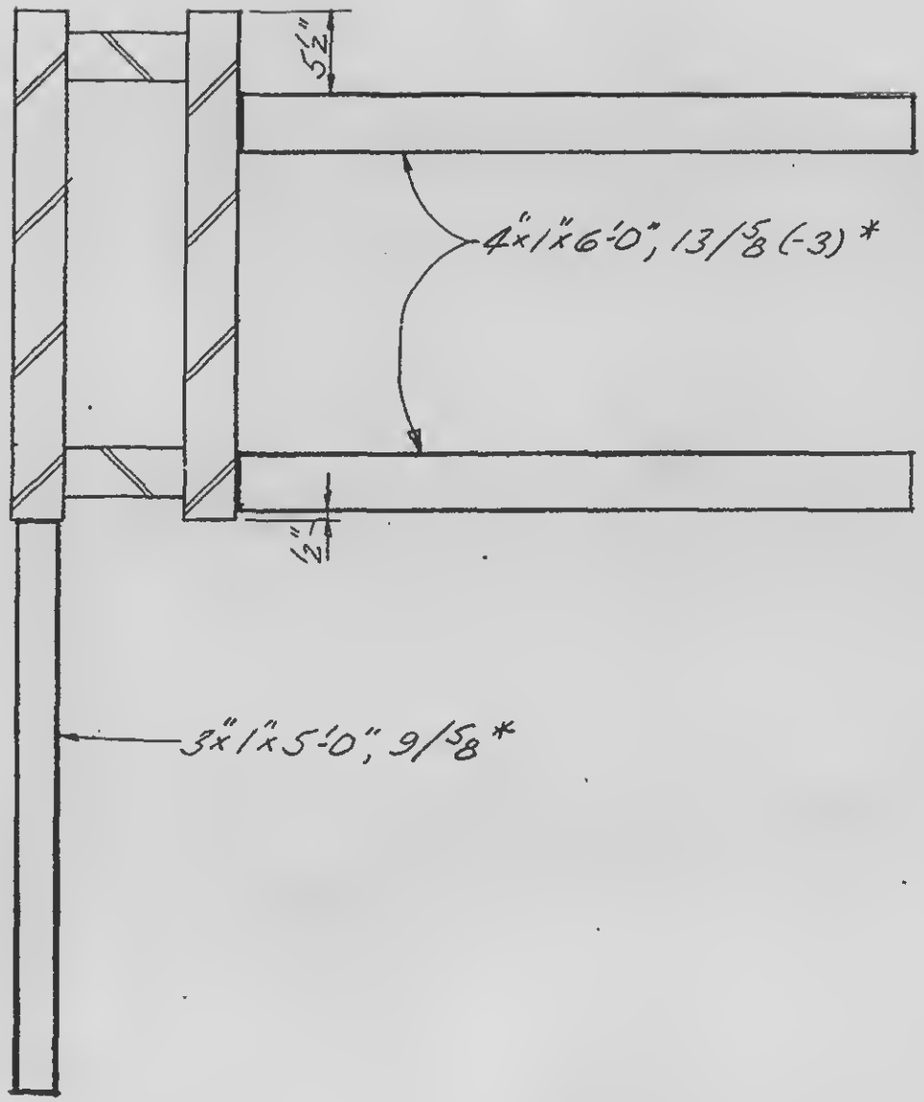
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18-ABZ-79.2

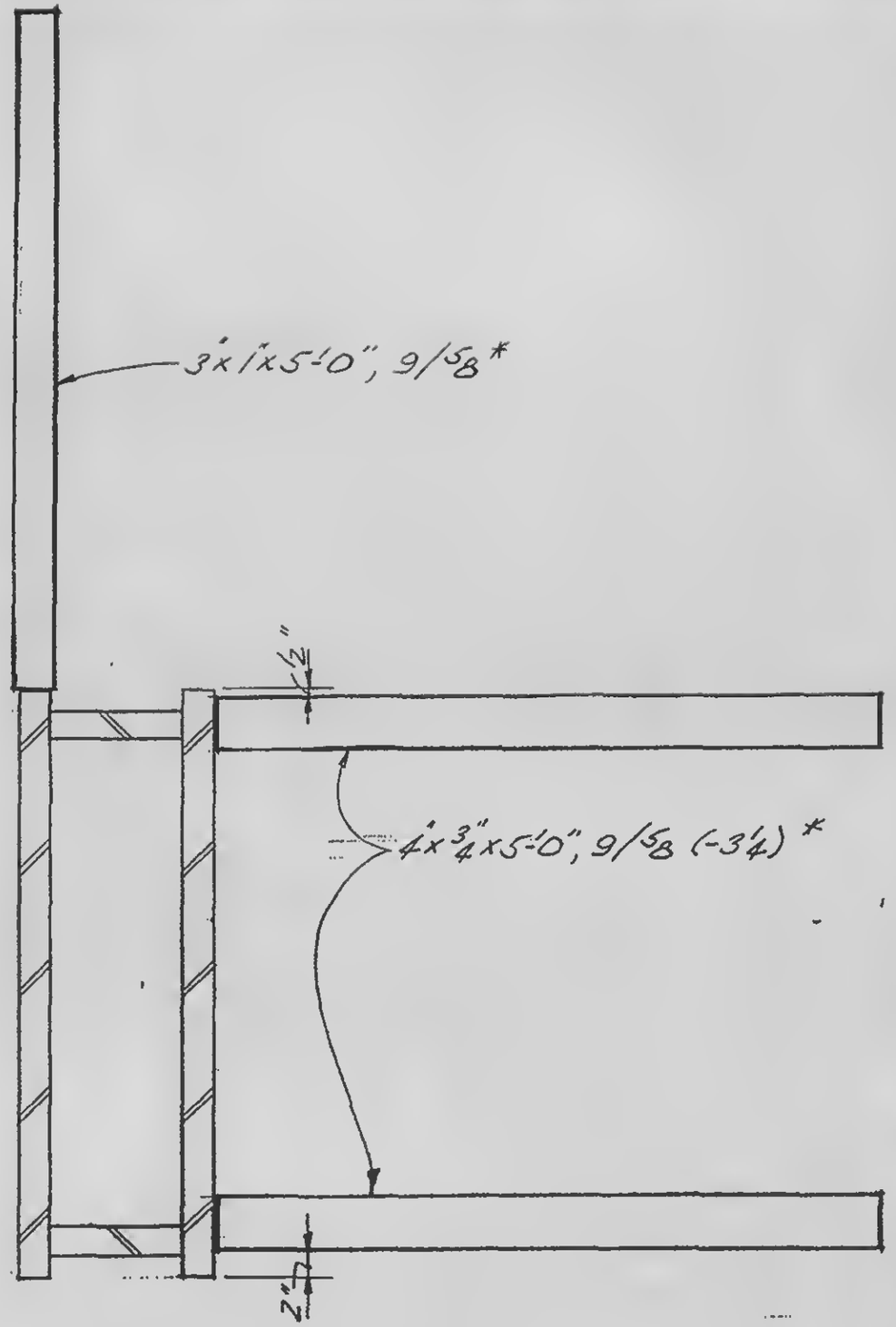
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL BO | DATE: 10-1-69

REVISIONS



Detail 80A



Detail 80B

*See Note 6, 18-AB2-2

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
NO. 34960
UNIVERSITY OF THE STATE OF NEW YORK

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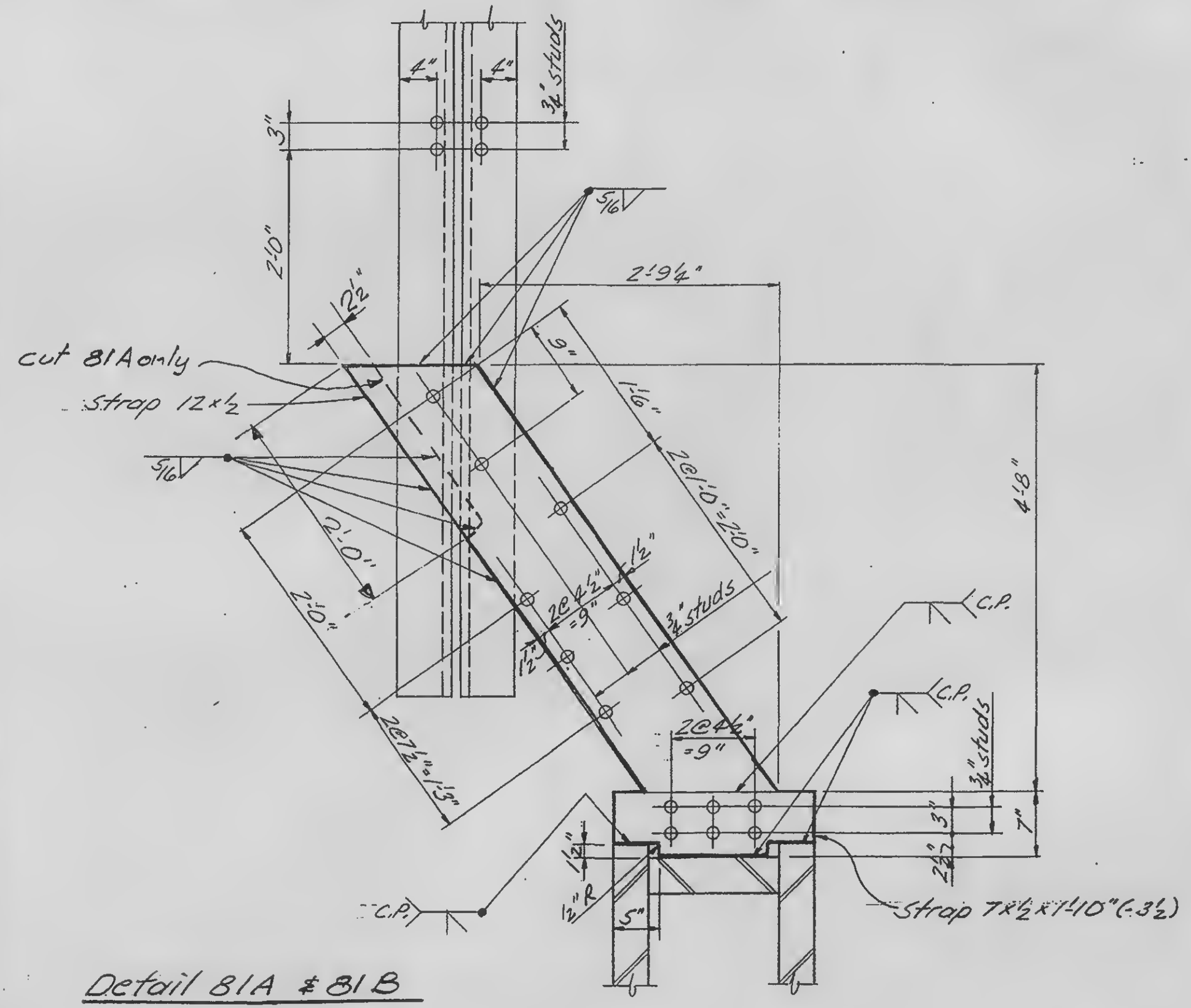
REVIEWED

18-AB2-80

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL 81 | DATE: 10-1-69

REVISIONS



Detail 81A & 81B

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34860 — UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED

DRAWN: J. Adams

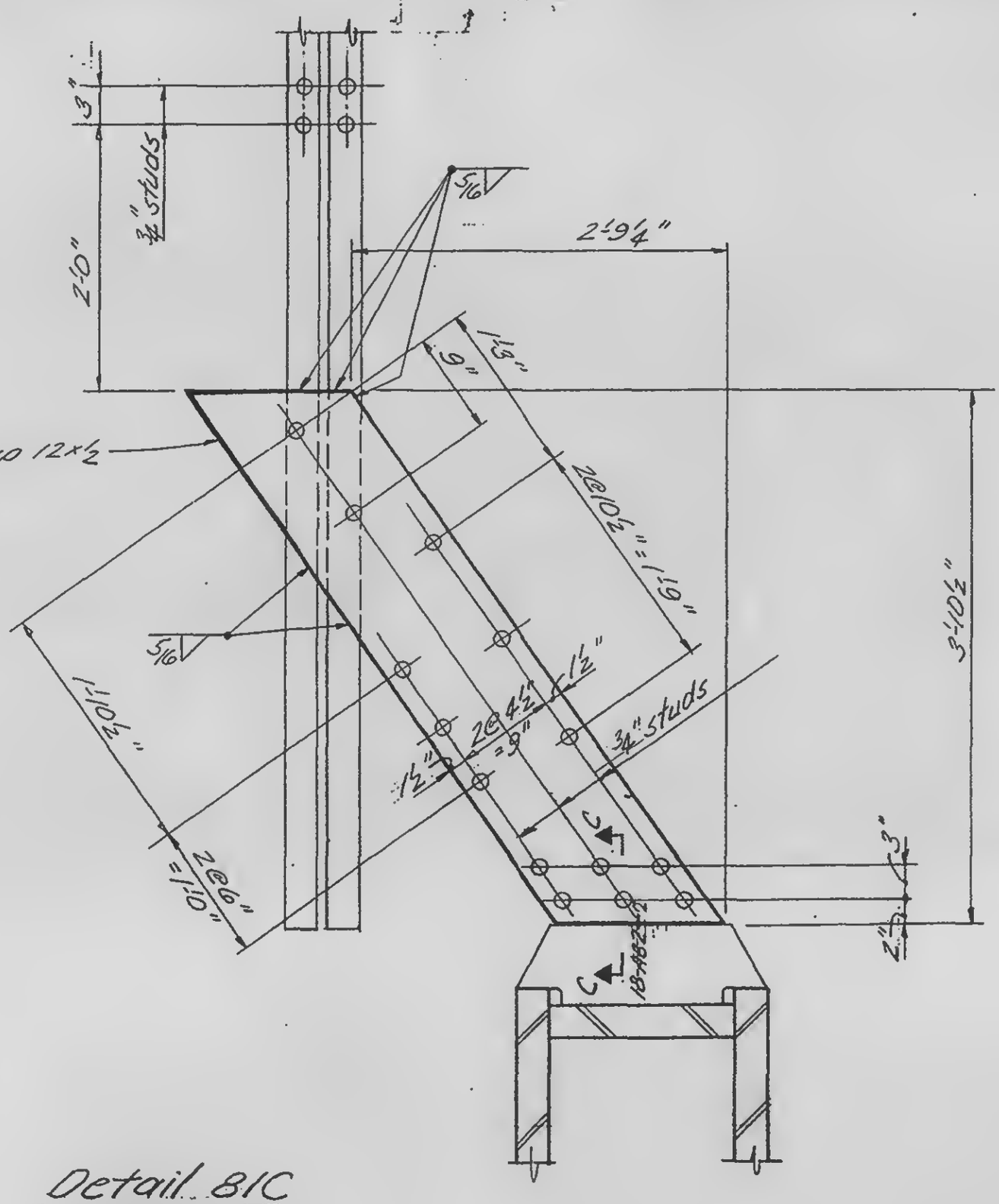
REVIEWED

18-AB2-81.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: STRAP ANCHORS - CORE - DETAIL B1 | DATE: 10-1-69

REVISIONS



Detail B1C

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DESIGNED

DRAWN J. Adams

REVIEWED

18-AB2-B1.2

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT	TITLE	DATE
THE WORLD TRADE CENTER	ANCHOR KEY PLANS - EXTERIOR WALL - INDEX	11/ 7/69

REVISIONS

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18-AB3- 7.1	FLOOR 43 TOWER A	
18-AB3- 7.2	FLOOR 43 TOWER B	
18-AB3- 8.1	FLOOR 44 TOWER A	
18-AB3- 8.2	FLOOR 44 TOWER B	
18-AB3- 9	FLOOR 45	
18-AB3-10	FLOORS 46 - 49	
18-AB3-11	FLOOR 77	
18-AB3-12	FLOOR 78	
18-AB3-13	FLOOR 79	
18-AB3-14	FLOORS 80 - 83	
18-AB3-15	FLOOR 107	HOLD
18-AB3-16	FLOOR 108	HOLD
18-AB3-17	FLOOR 110	HOLD

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

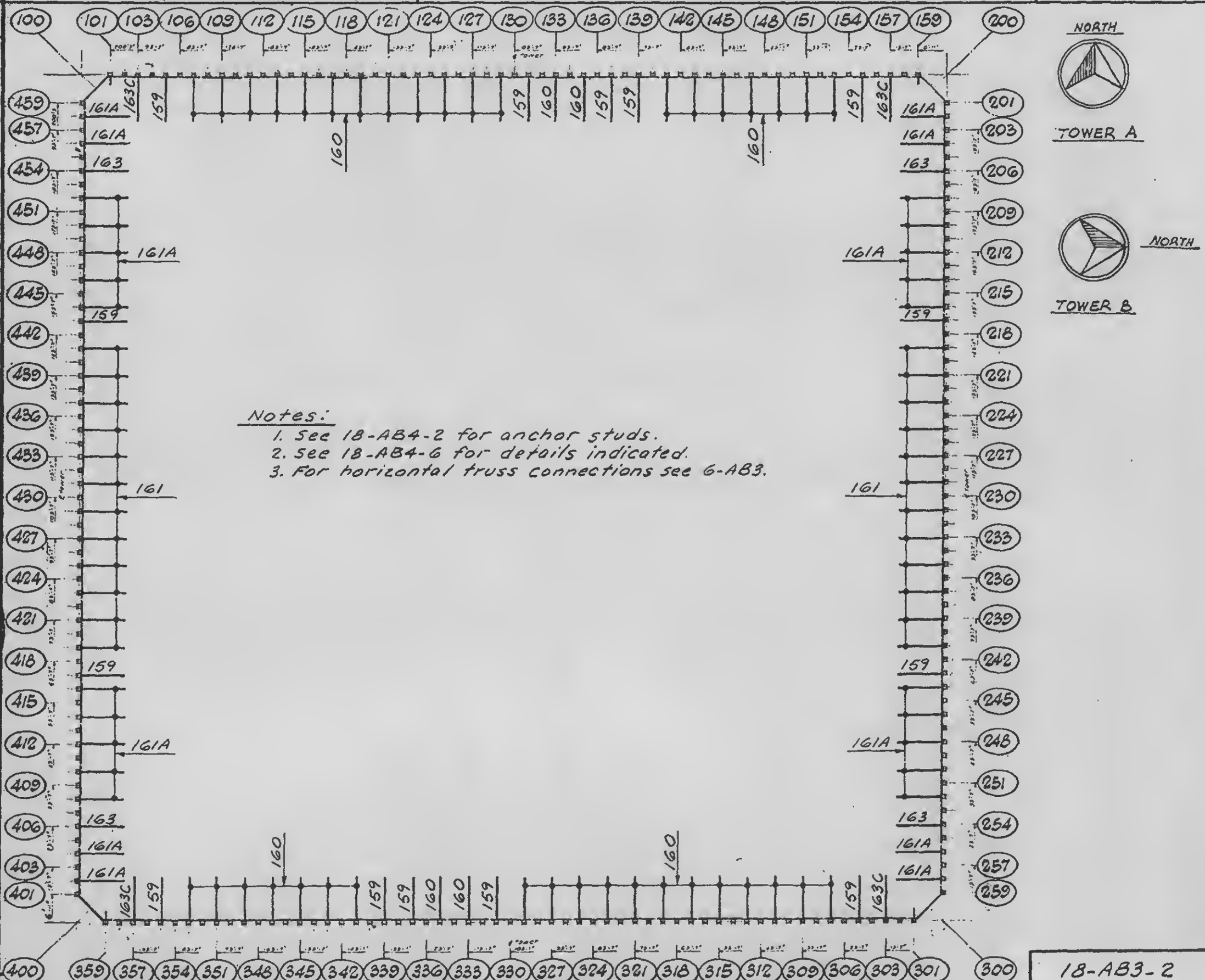
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 7

DATE: 2-7-69

VISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details indicated.
3. For horizontal truss connections see 6-AB3.

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED S. Karp

DRAWN A. Franqui

REVIEWED W. Brewer

18-AB3-2

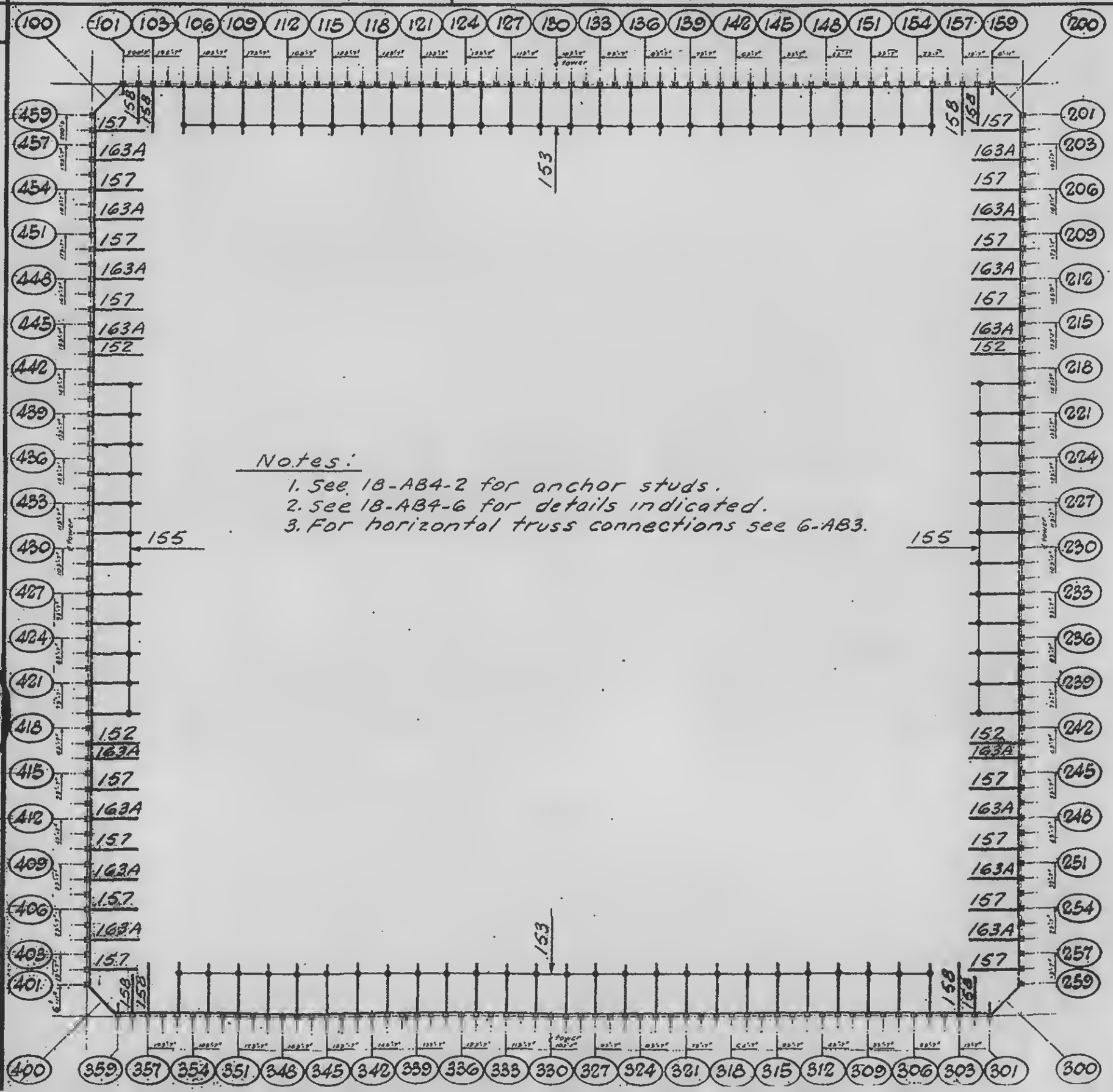
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 9 TOWER A

DATE: 2-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details indicated.
3. For horizontal truss connections see 6-AB3.

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED S. Karp

DRAWN A. Fraioli

REVIEWED L. Robertson

18-A3-3.1

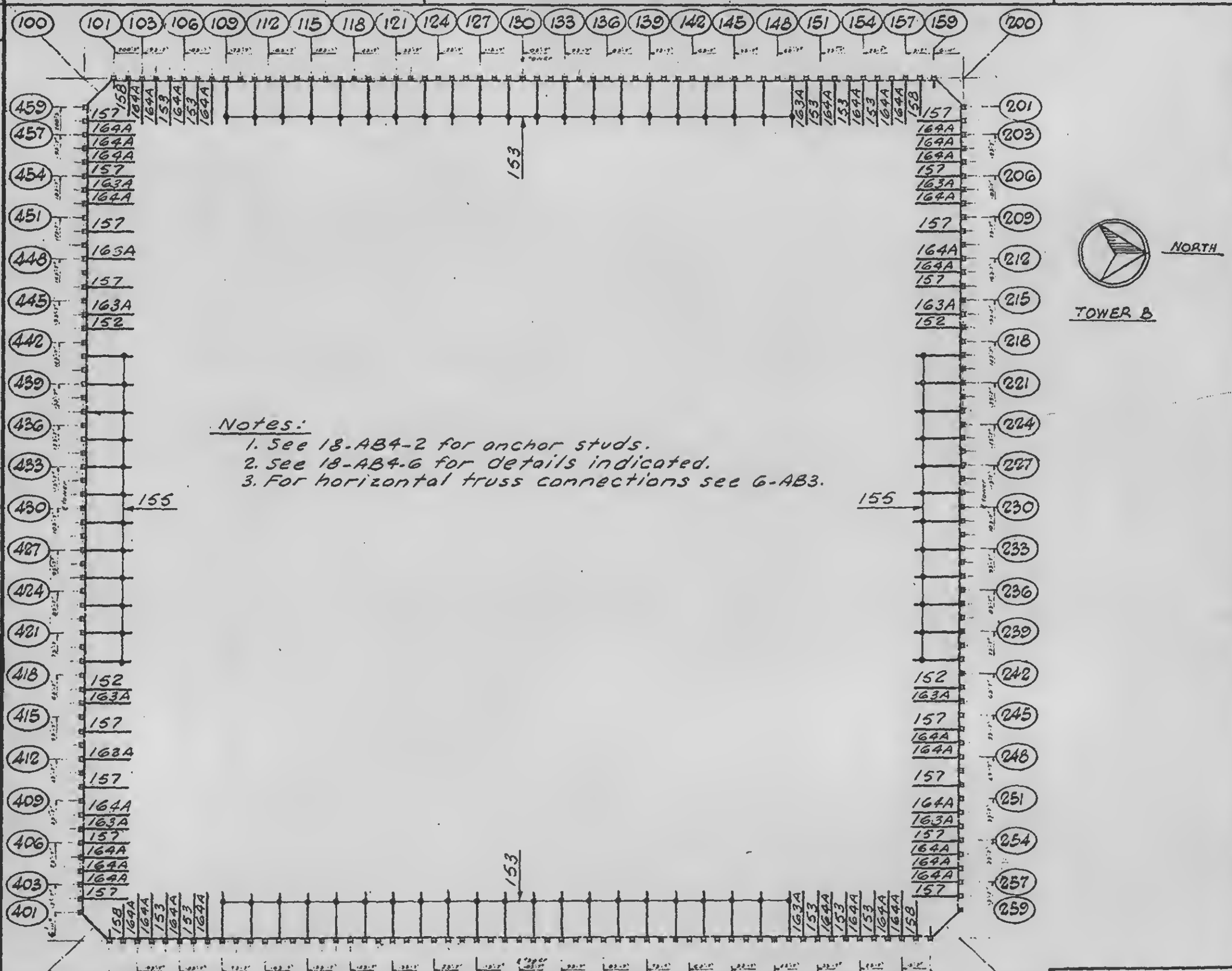
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 9 TOWER B

DATE: 2-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details indicated.
3. For horizontal truss connections see 6-AB3.

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED S. Karp

DRAWN A. Franqui

REVIEWED

18-AB3-3

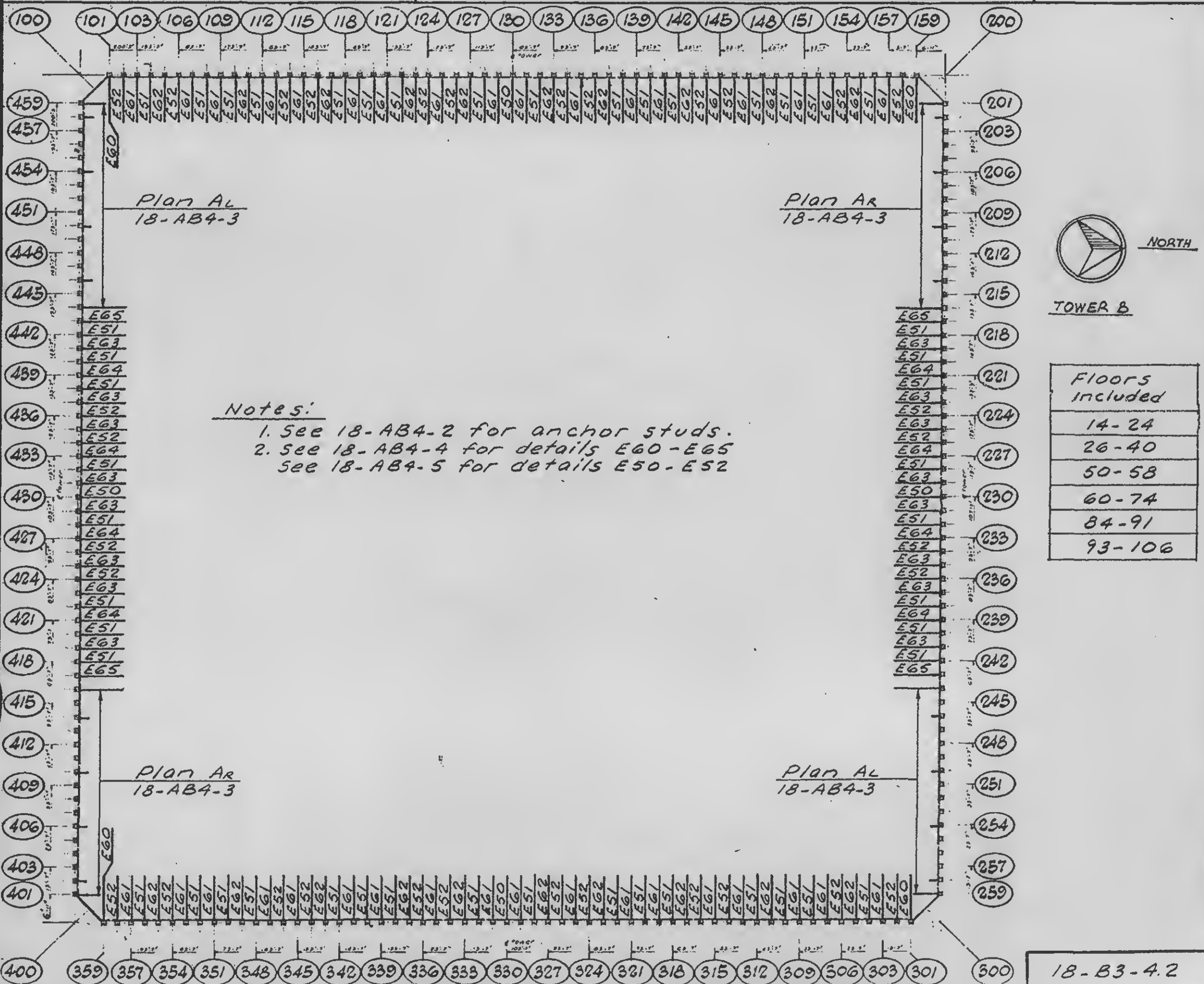
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOORS TOWER B (See Table)

DATE: 2-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-4 for details E60-E65
   See 18-AB4-5 for details E50-E52

Floors included
14-24
26-40
50-58
60-74
84-91
93-106

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. Karp

DRAWN A. Franqui

REVIEWED W. Brewer

18-B3-4.2

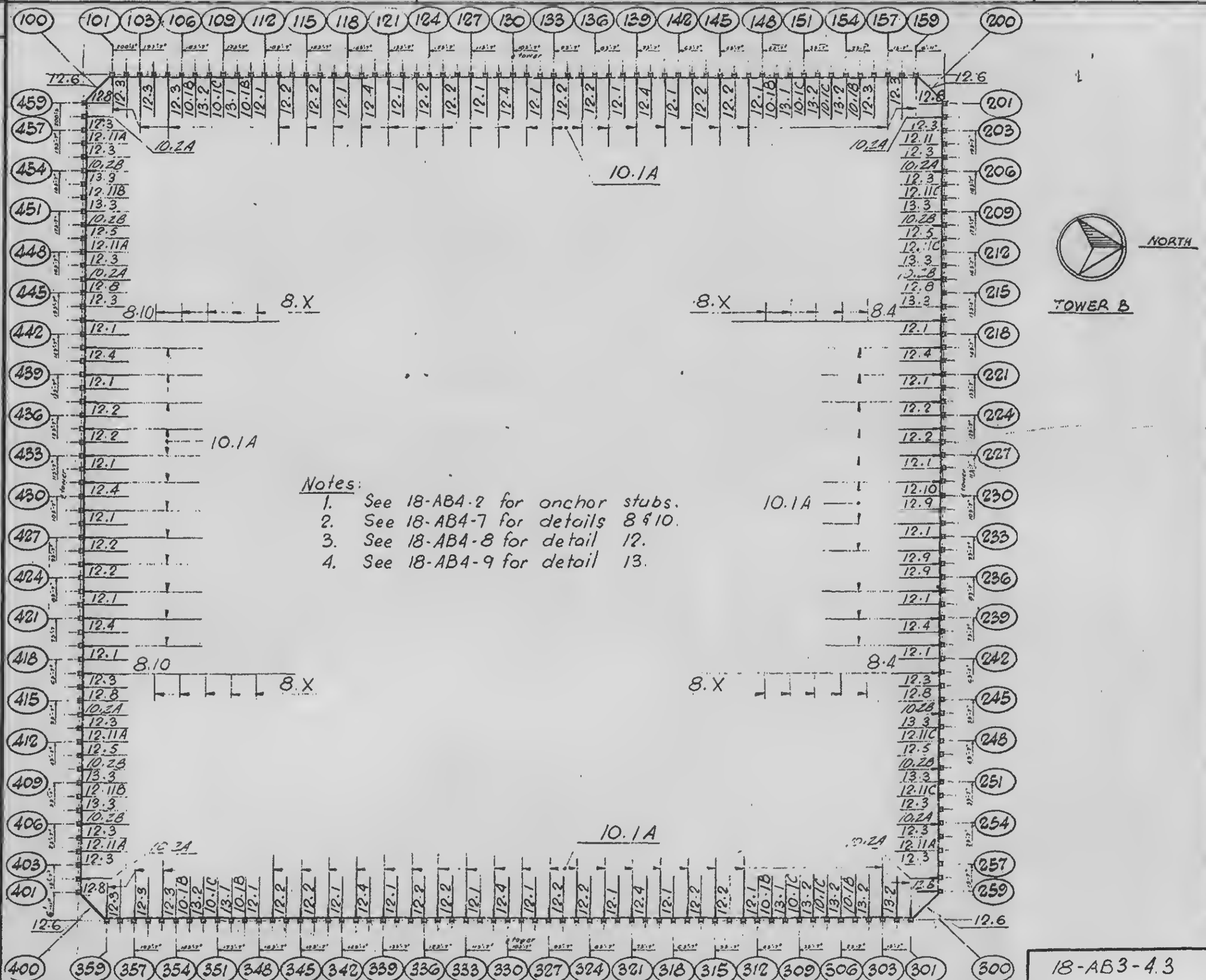
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN 10TH FLOOR TOWER B

DATE: 11-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for onchor stubs.
2. See 18-AB4-7 for details 8 & 10.
3. See 18-AB4-8 for detail 12.
4. See 18-AB4-9 for detail 13.

SIGNED

DRAWN T. Terrelonge

REVIEWED

18-AB3-4.3

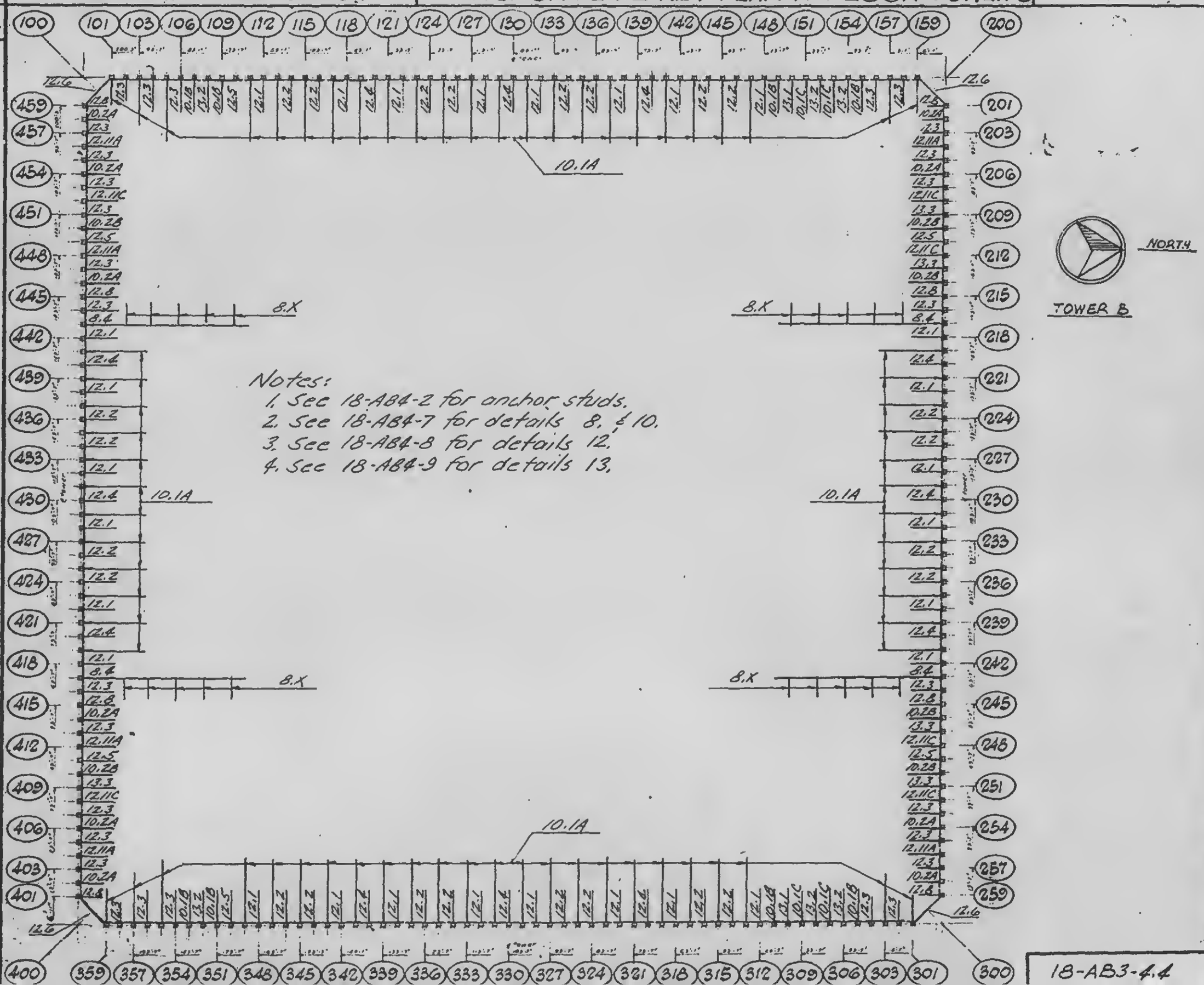
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN 11TH FLOOR TOWER 'B'

DATE: 11-7-69

VISIONS



Notes:
1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-7 for details 8. & 10.
3. See 18-AB4-8 for details 12.
4. See 18-AB4-9 for details 13.

DESIGNED

DRAWN

REVIEWER

18-AB3-4.4

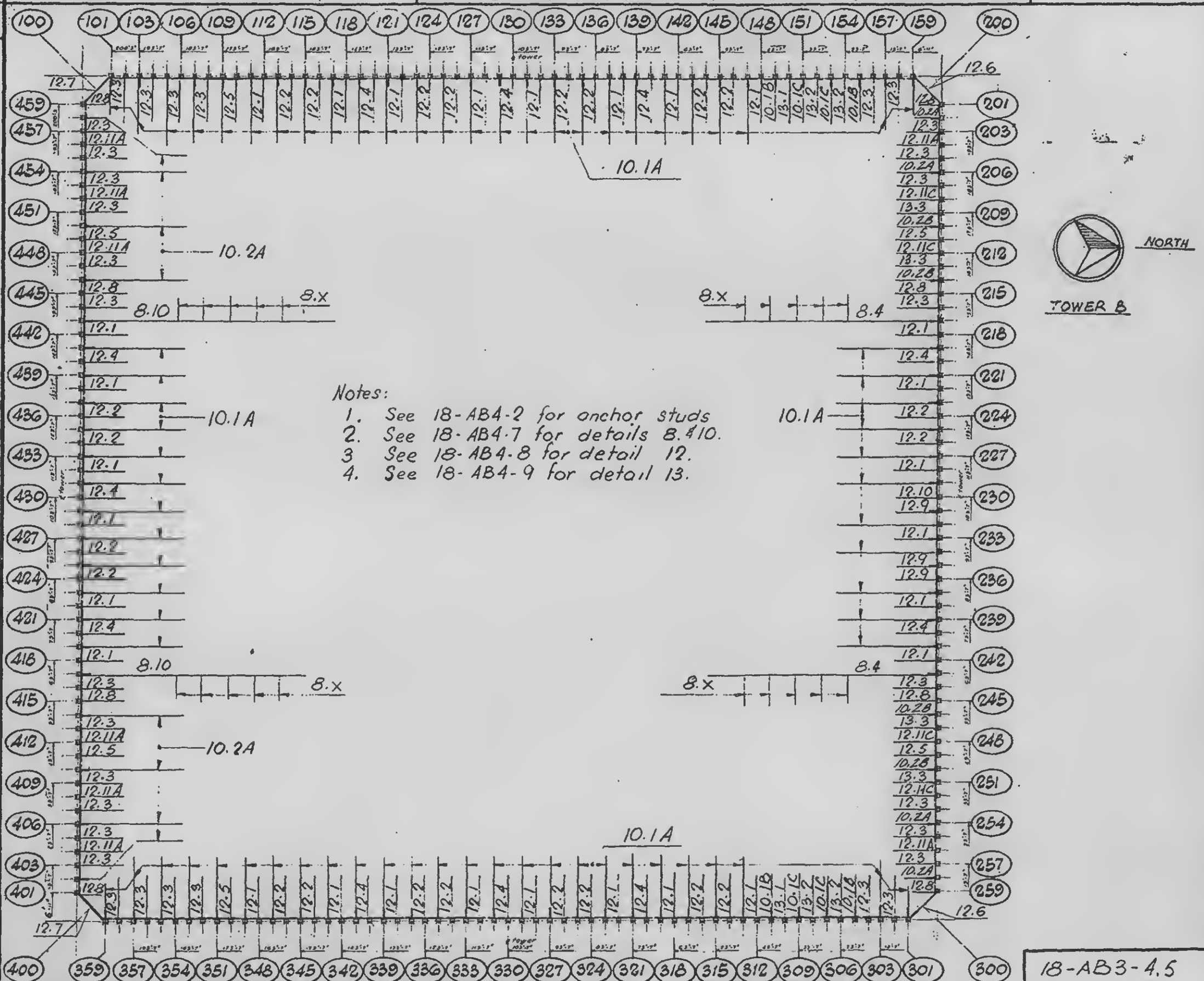
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN 12TH FLOOR TOWER "B"

DATE: 11-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs
2. See 18-AB4-7 for details 8.410.
3. See 18-AB4-8 for detail 12.
4. See 18-AB4-9 for detail 13.

DESIGNED

DRAWN: T. Terrelonge

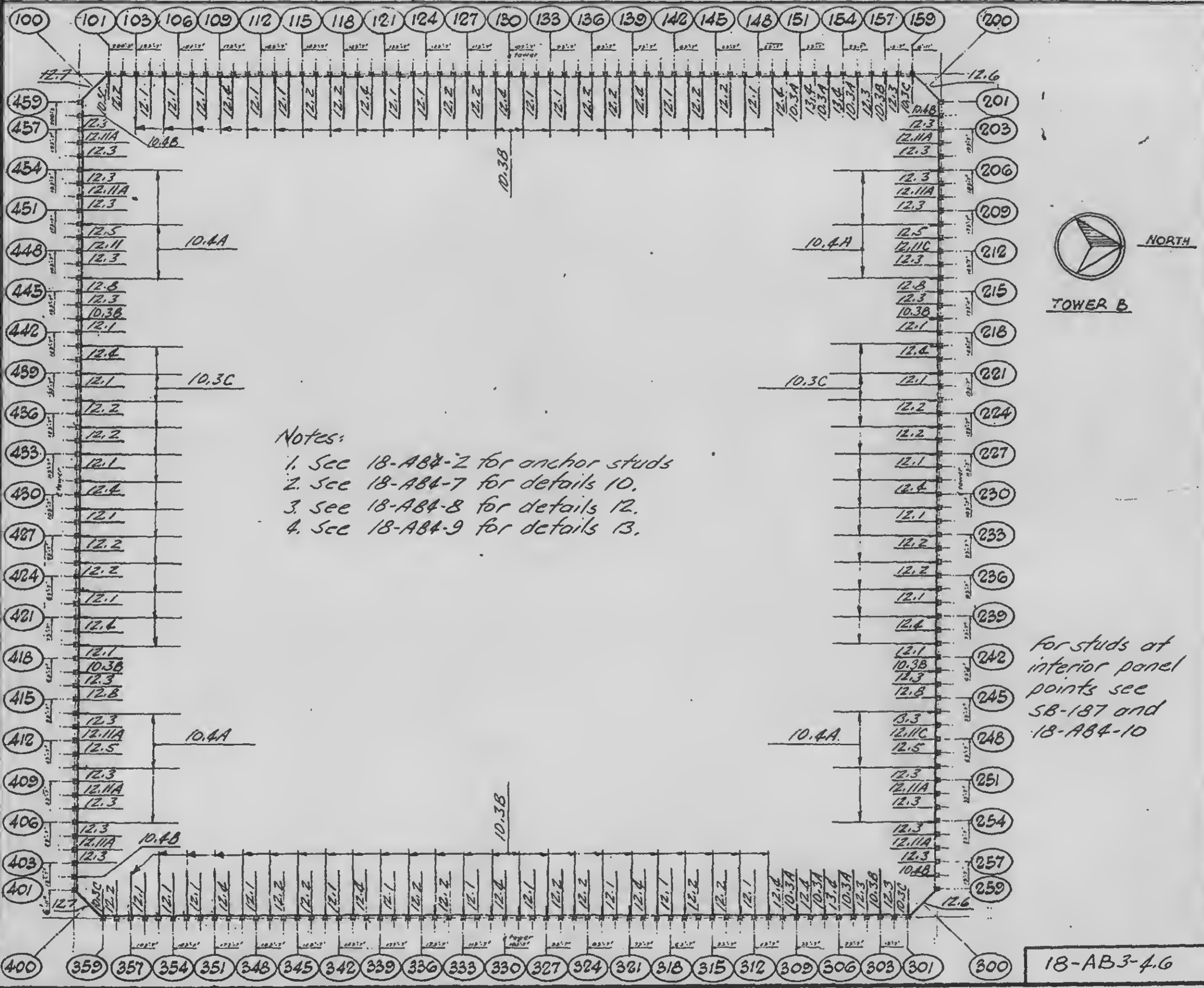
REVIEWED

18-AB3-4.5

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE ANCHOR PLATE KEY PLAN 13TH FLOOR TOWER "B" | DATE 11-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs
2. See 18-AB4-7 for details 10.
3. See 18-AB4-8 for details 12.
4. See 18-AB4-9 for details 13.

for studs at interior panel points see SB-187 and 18-AB4-10

SIGNED

DRAWN

REVIEWED

18-AB3-4.6

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOORS 25, 59, 92

DATE: 2-7-69

REVISIONS



NORTH

TOWER A

NORTH

TOWER B

Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-4 for details E69 - E74
   See 18-AB4-5 for details E50 - E52

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED: J. Karp

DRAWN: A. Franqui

REVIEWED: W. Brewer

18-AB3-5

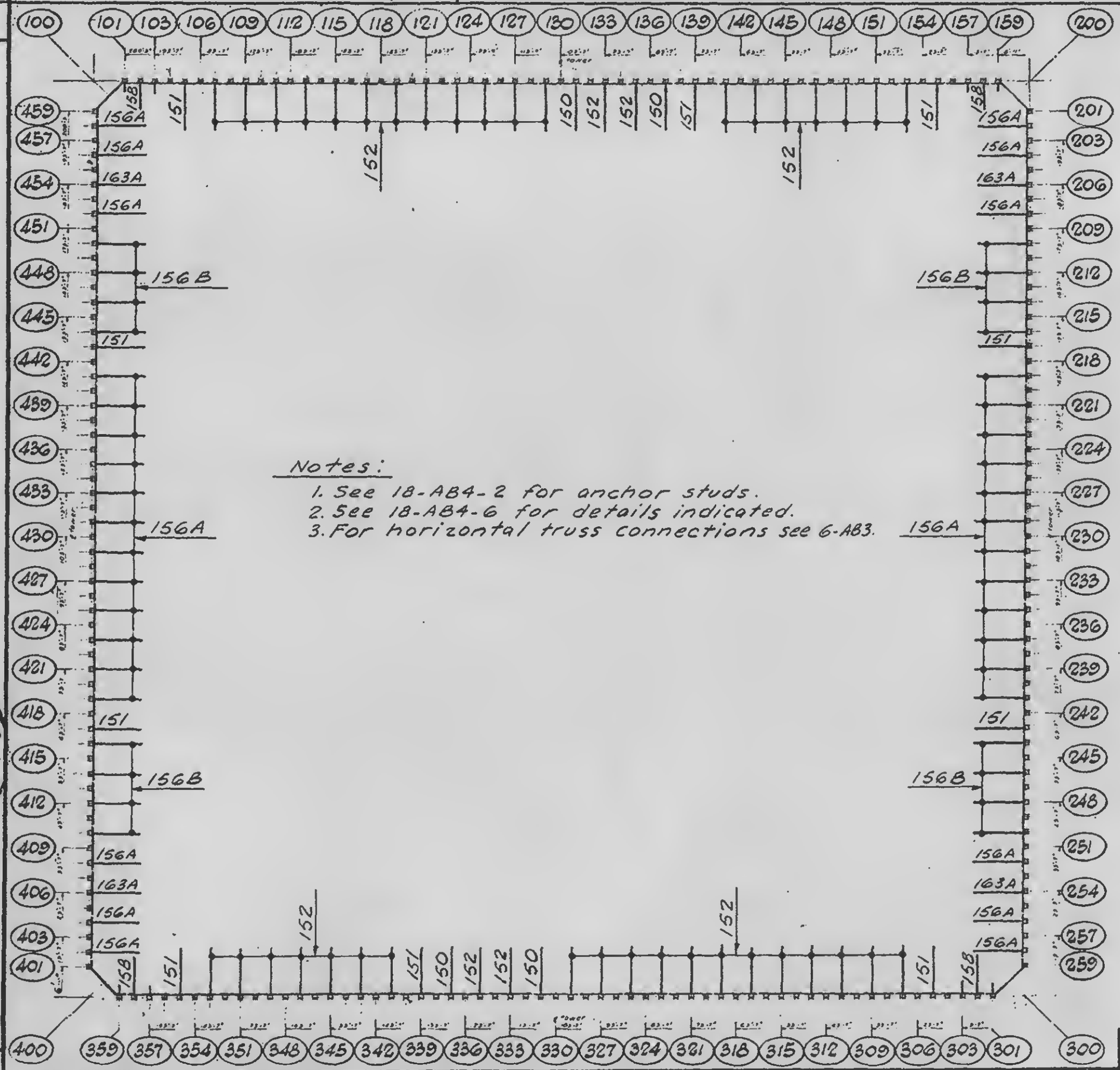
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOORS 41, 75

DATE: 2-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details indicated.
3. For horizontal truss connections see 6-AB3.

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

SIGNED: S. Karp.

DRAWN: A. Frangui

REVIEWED: N. Brewer

18-AB3-6

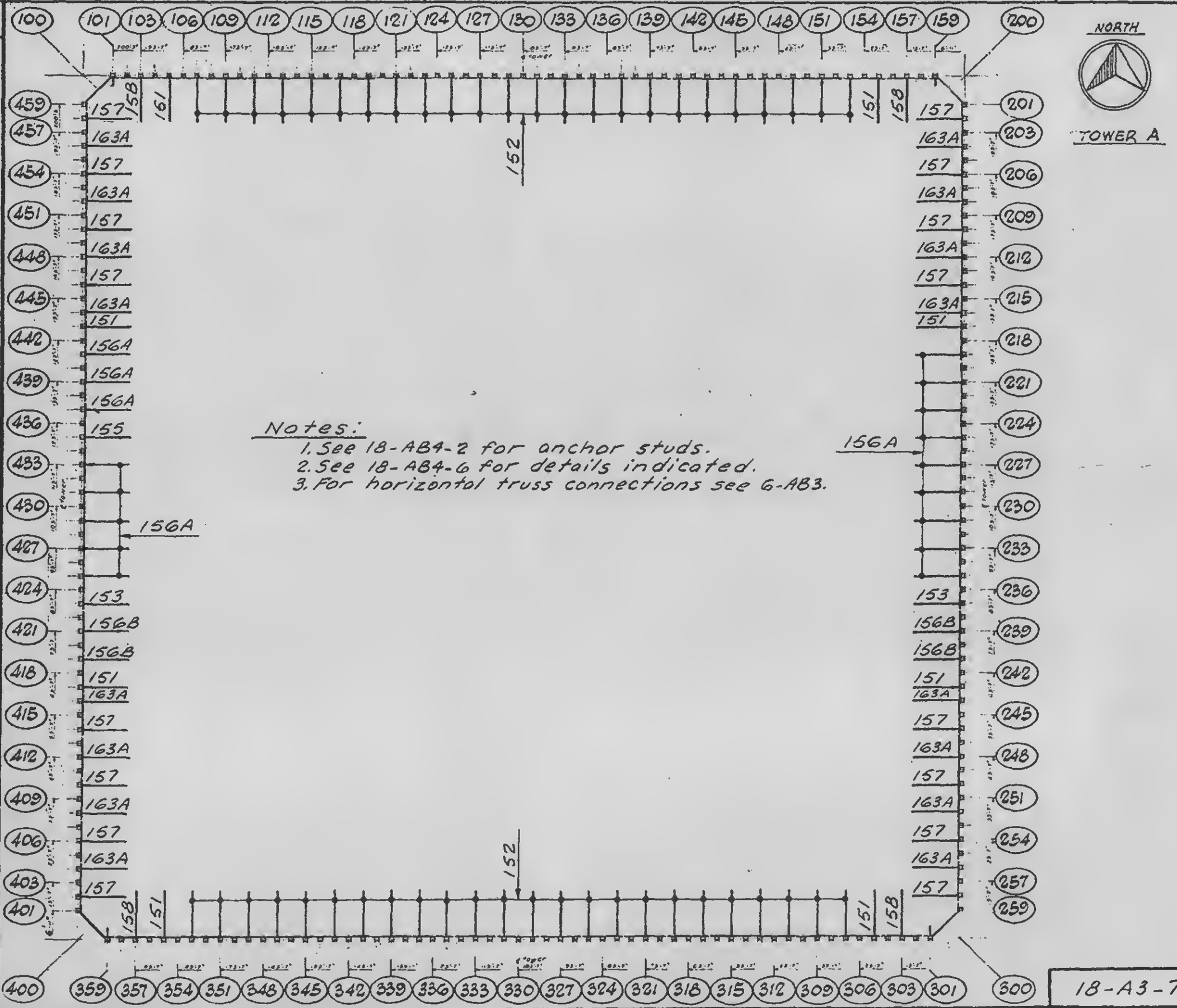
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 43 TOWER A

DATE: 2-7-69

REVISIONS



NORTH

TOWER A

Notes:
1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details indicated.
3. For horizontal truss connections see 6-AB3.

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. Korp

DRAWN A. Frangui

REVIEWED W. Brewer

18-A3-7.1

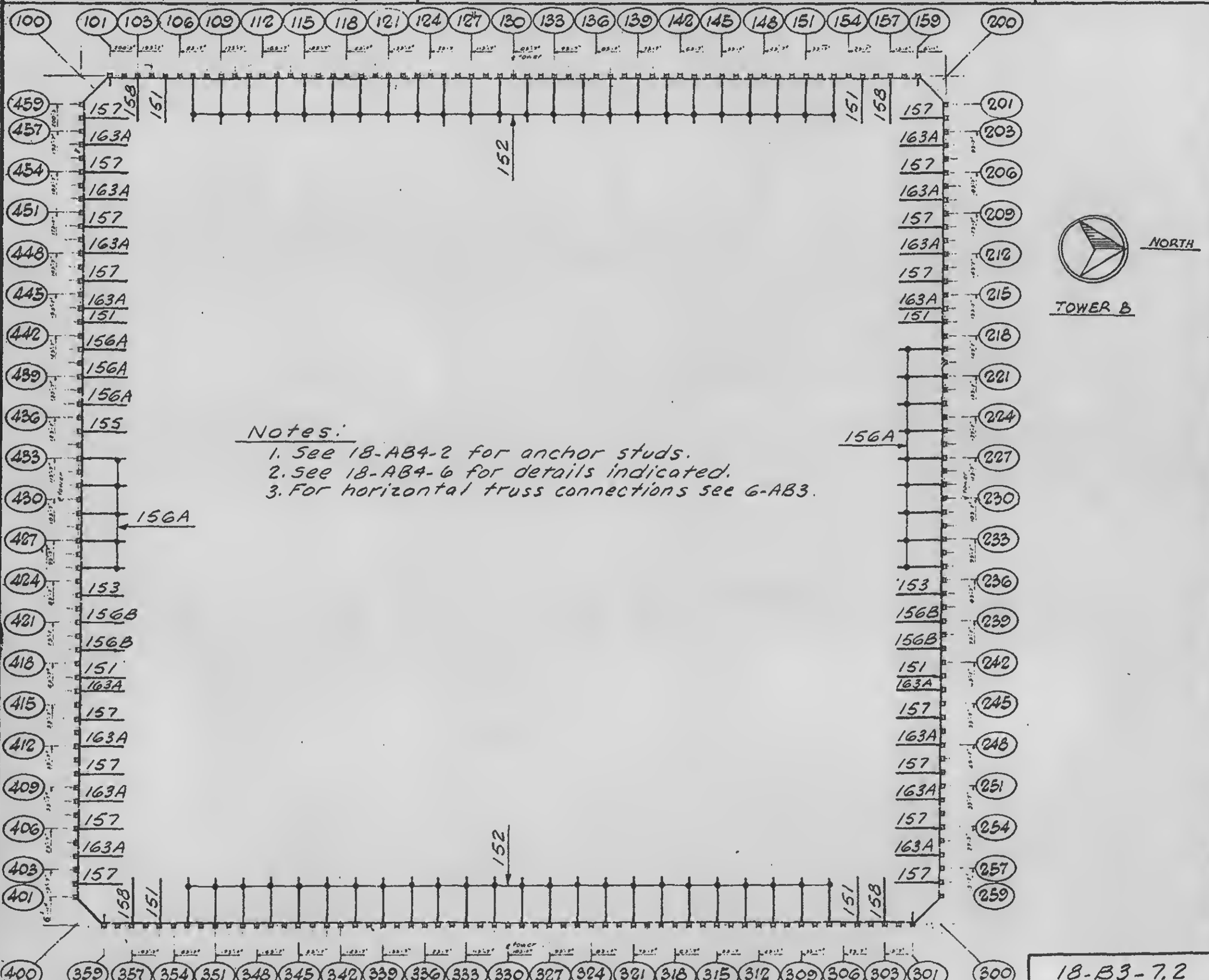
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 43 TOWER B

DATE: 2-7-69

VISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details indicated.
3. For horizontal truss connections see 6-AB3.

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — STATE OF NEW YORK

DESIGNED S. Karp

DRAWN A. Franqui

REVIEWED

18-B3-7.2

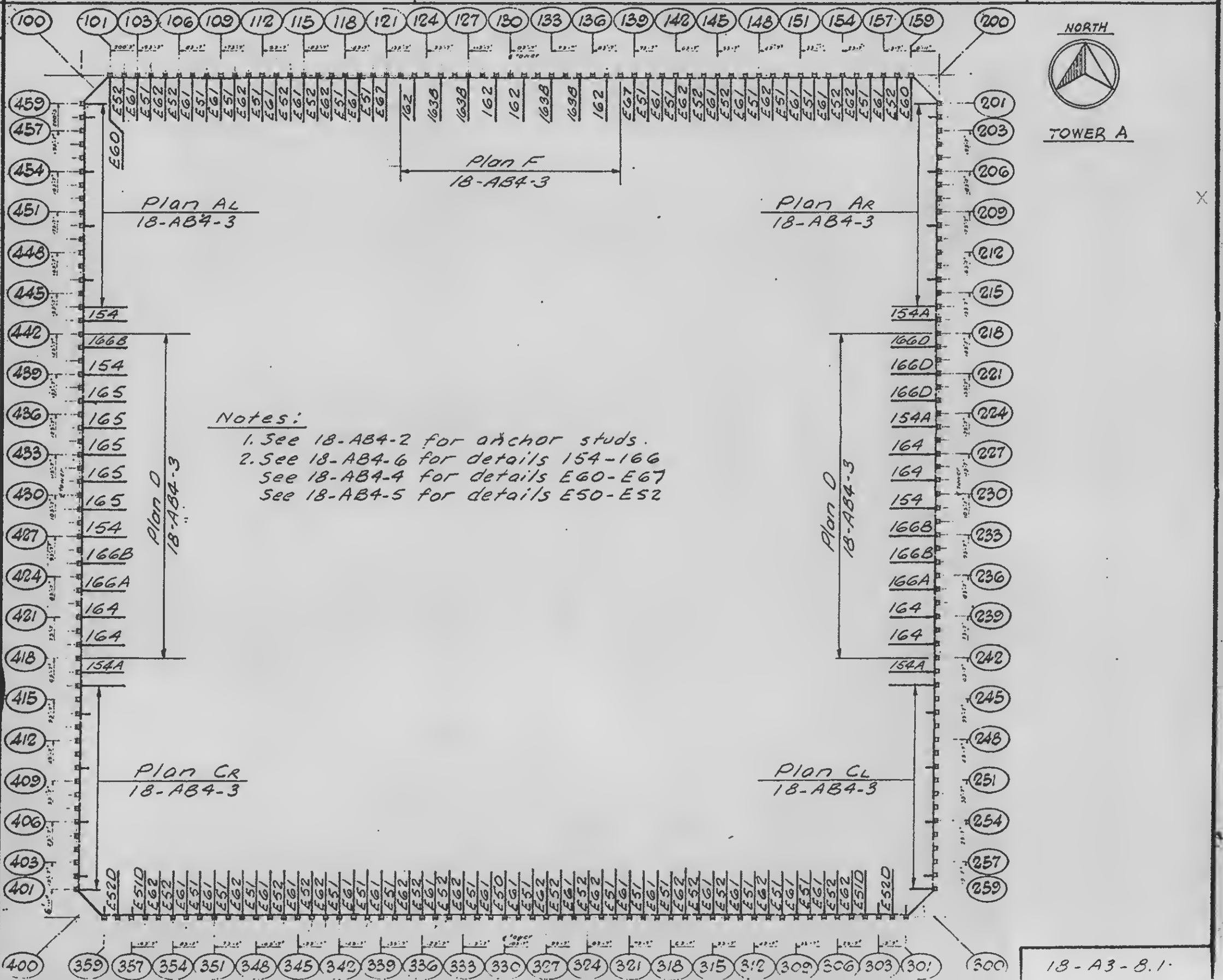
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 44 TOWER A

DATE:

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details 154-166
   See 18-AB4-4 for details E60-E67
   See 18-AB4-5 for details E50-E52

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED: S. Karp

DRAWN: A. Franqui

REVIEWED: M. Brewer

18-A3-8.1

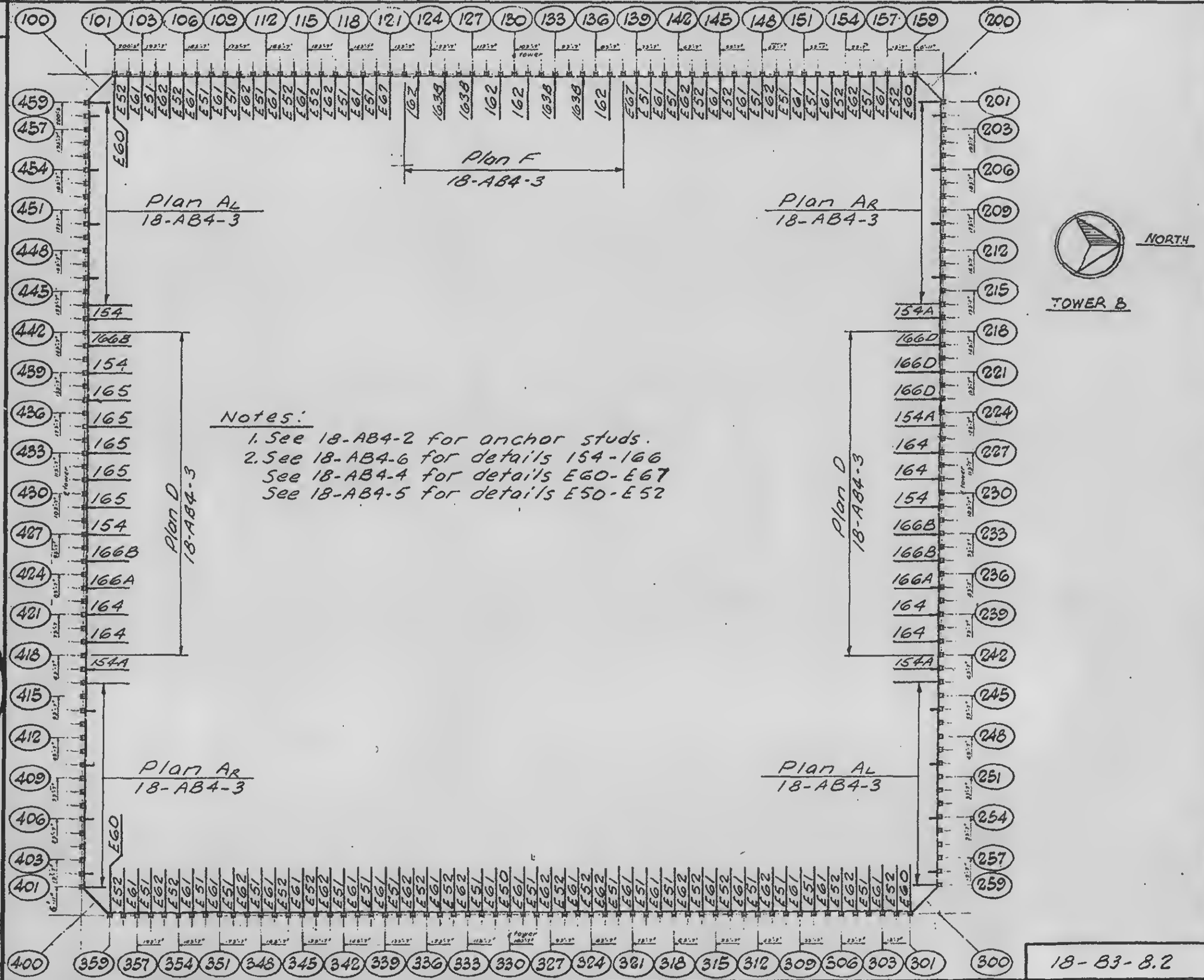
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 44 TOWER B

DATE: 2-7-69

REVISIONS


100
101 103 106 109 112 115 118 121 124 127 130 133 136 139 142 145 148 151 154 157 159
200
459 457 454 451 448 445 442 439 436 433 430 427 424 421 418 415 412 409 406 403 401
201 203 206 209 212 215 218 221 224 227 230 233 236 239 242 245 248 251 254 257 259
400
359 357 354 351 348 345 342 339 336 333 330 327 324 321 318 315 312 309 306 303 301
300
E60
E52 E61 E51 E62 E52 E61 E51 E62 E52 E61 E51 E62

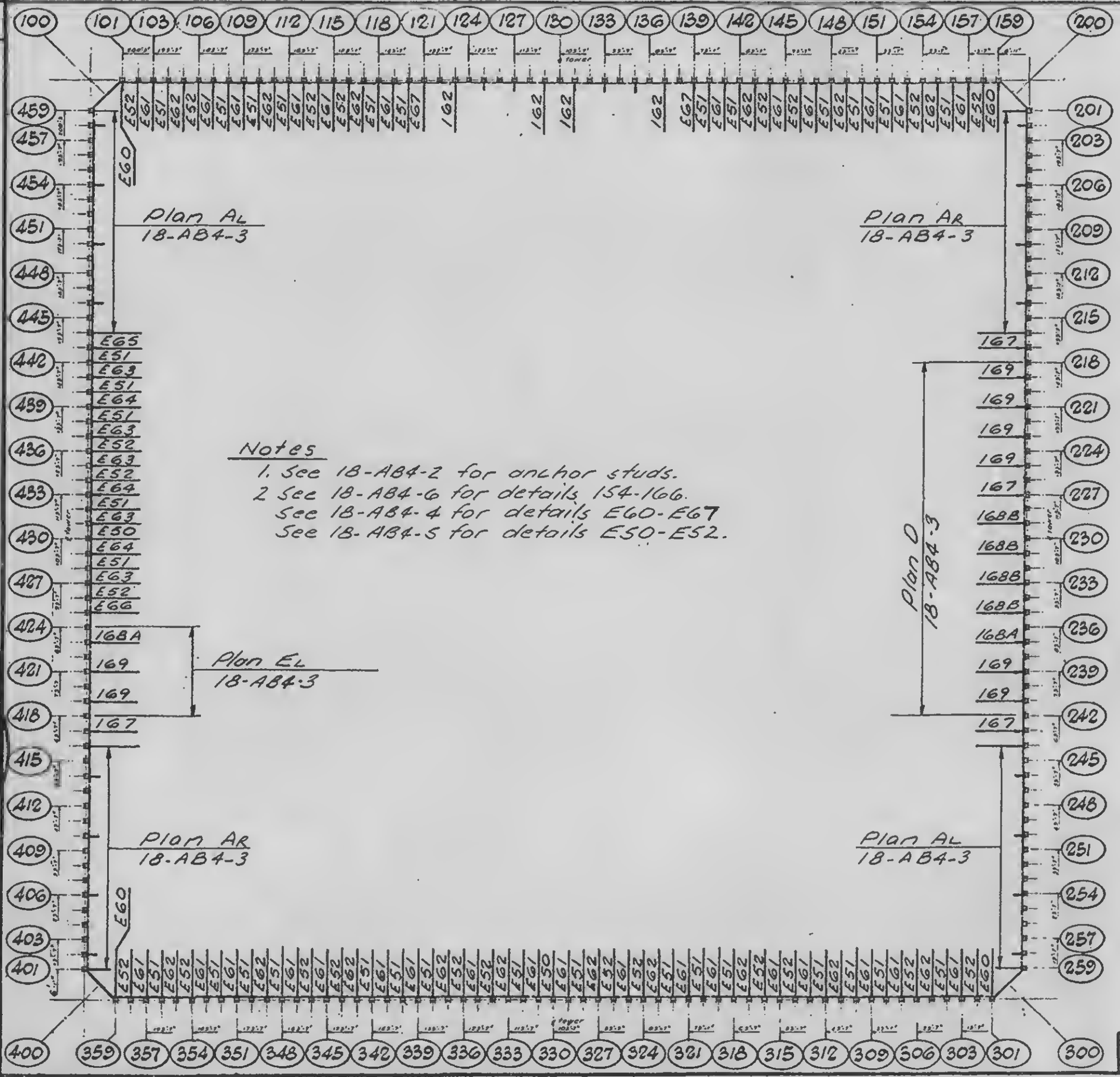
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE ANCHOR PLATE KEY PLAN FLOOR 45

DATE 2-7-69

REVISIONS



Notes

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details 154-166.
   See 18-AB4-4 for details E60-E67
   See 18-AB4-5 for details E50-E52.

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

DRAWN A. Franqui

REVIEWED W. Brewer

18-AB3-9

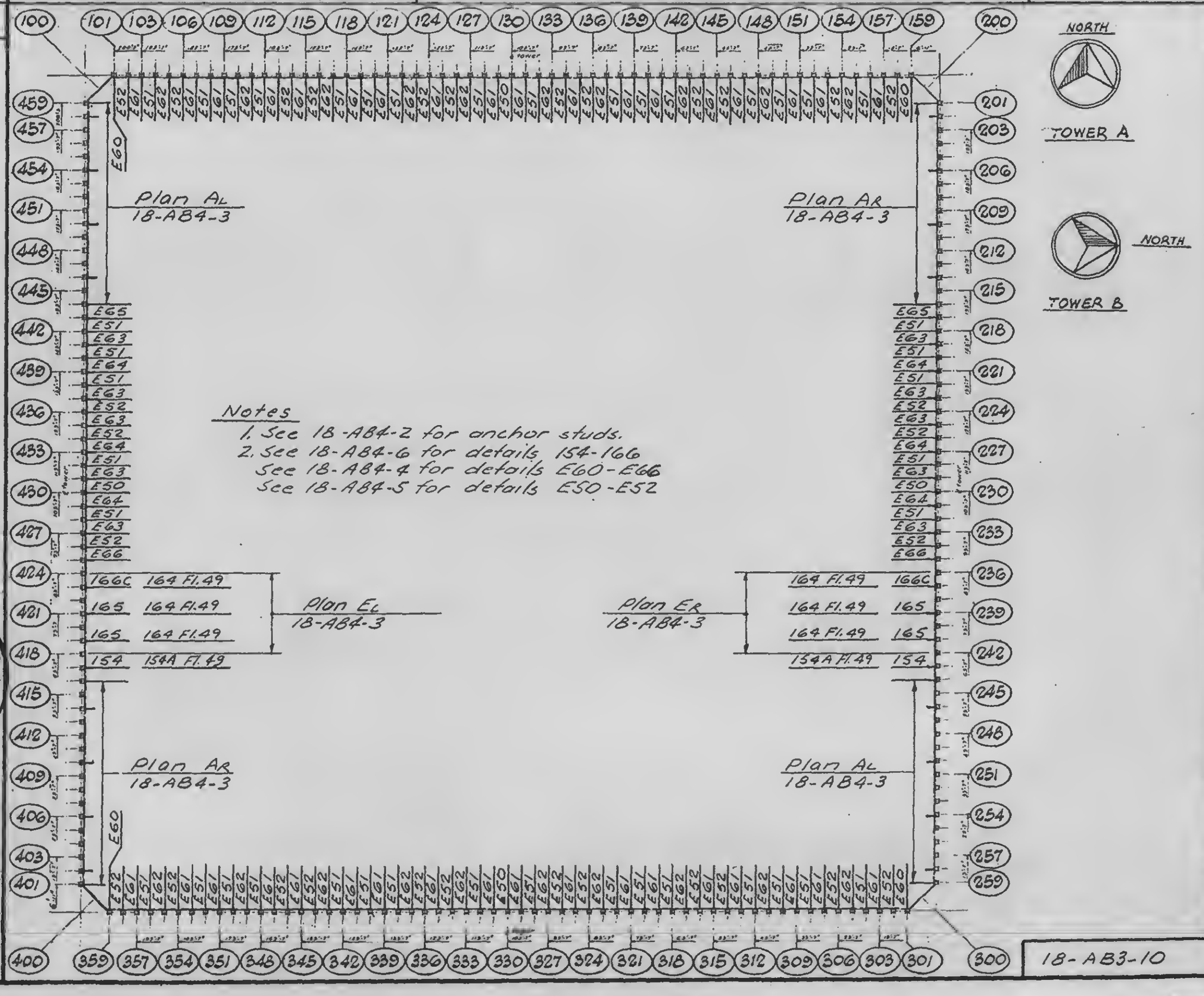
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOORS 46-49

DATE: 2-7-69

REVISIONS



Notes

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details 154-166
   See 18-AB4-4 for details E60-E66
   See 18-AB4-5 for details E50-E52

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED

DRAWN: A. Franqui

REVIEWED: W. Brewer

18-AB3-10

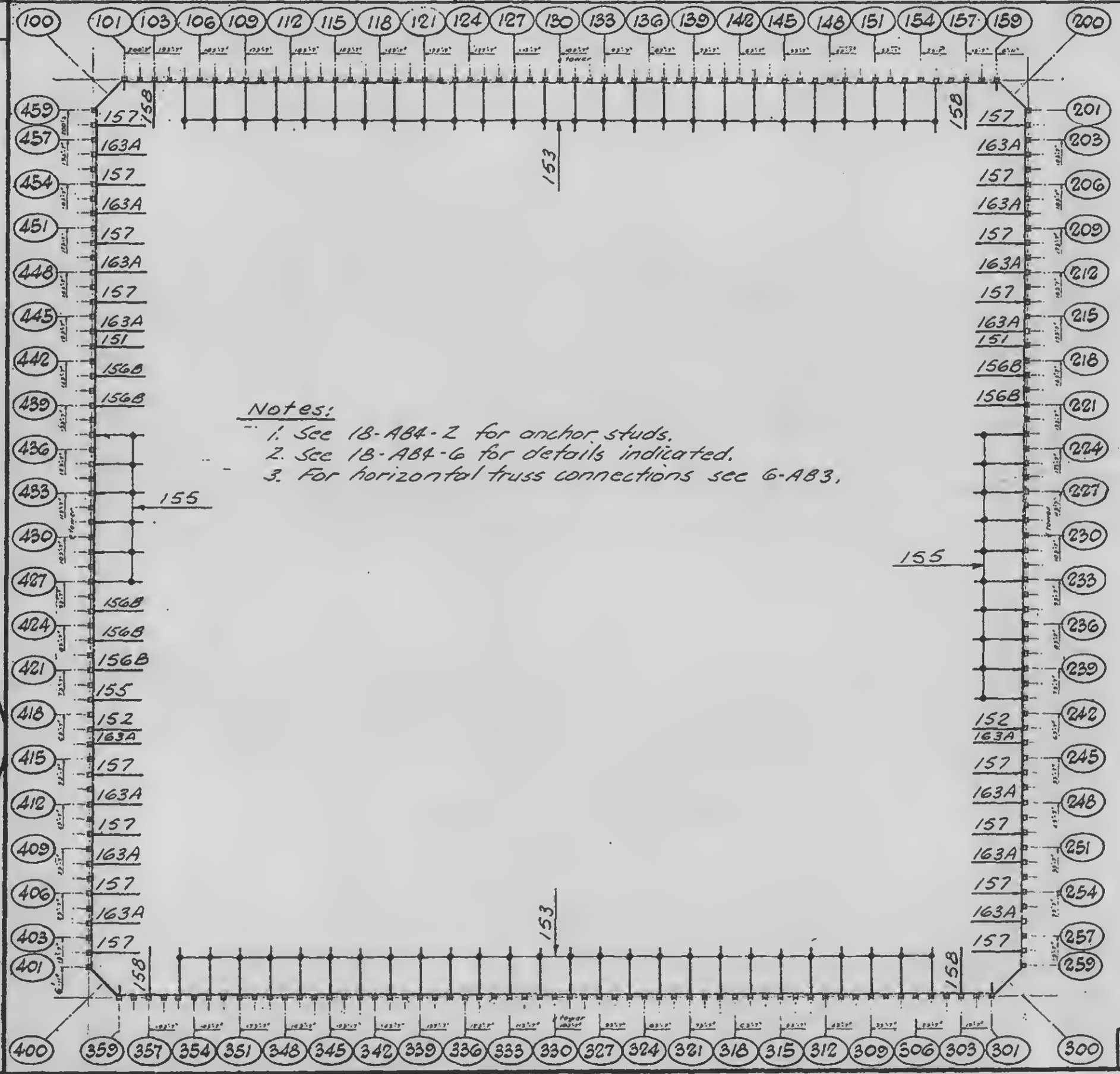
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 77

DATE: 2-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details indicated.
3. For horizontal truss connections see 6-AB3.

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — STATE OF NEW YORK

CHECKED S.I. P

DRAWN A. Franqui

REVIEWED D. Brewer

18-AB3-11

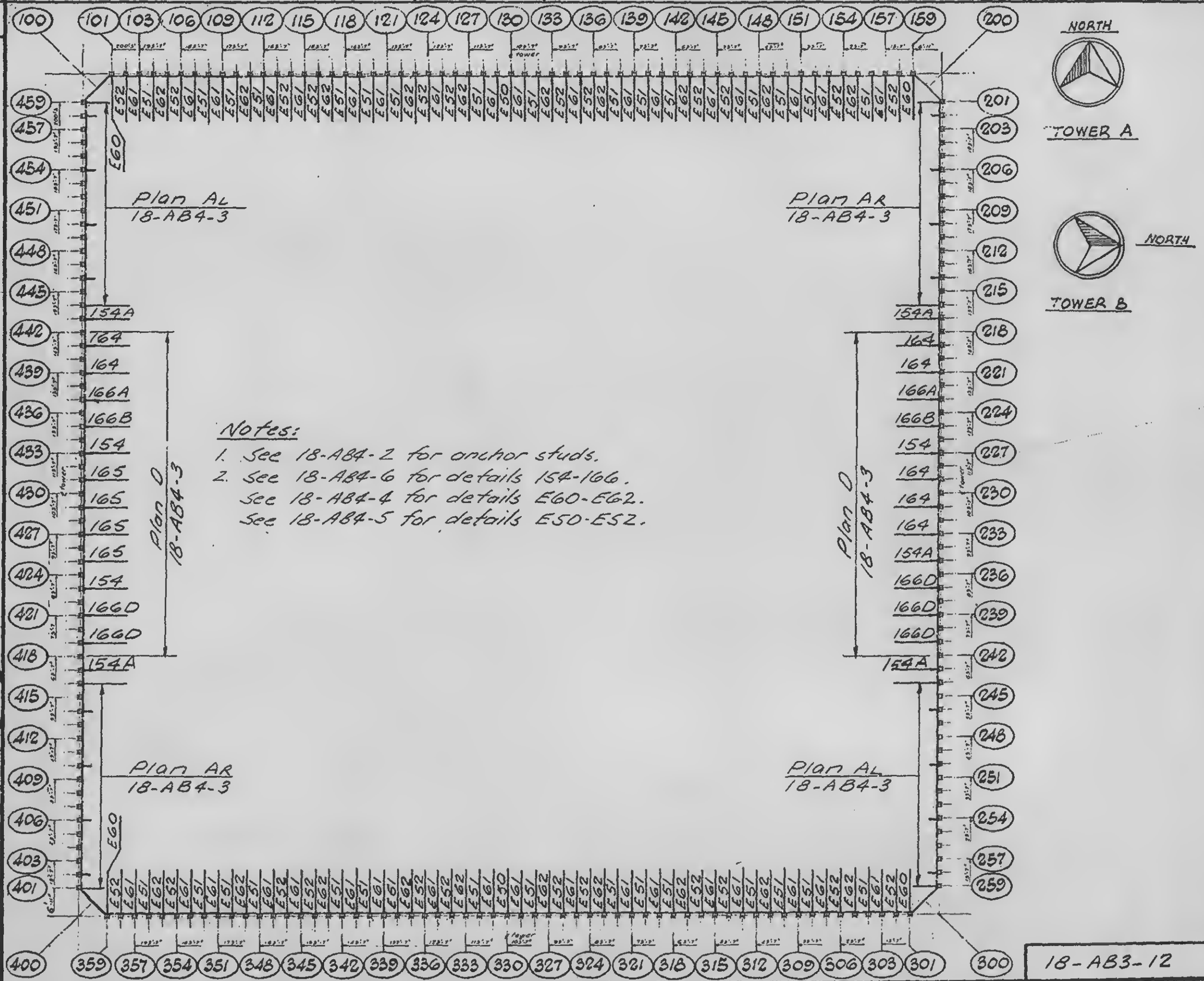
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 78

DATE: 2-7-69

REVISIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details 154-166.
   See 18-AB4-4 for details E60-E62.
   See 18-AB4-5 for details E50-E52.

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. I. P.

DRAWN A. Franqui

REVIEWED D. Brewer

18-AB3-12

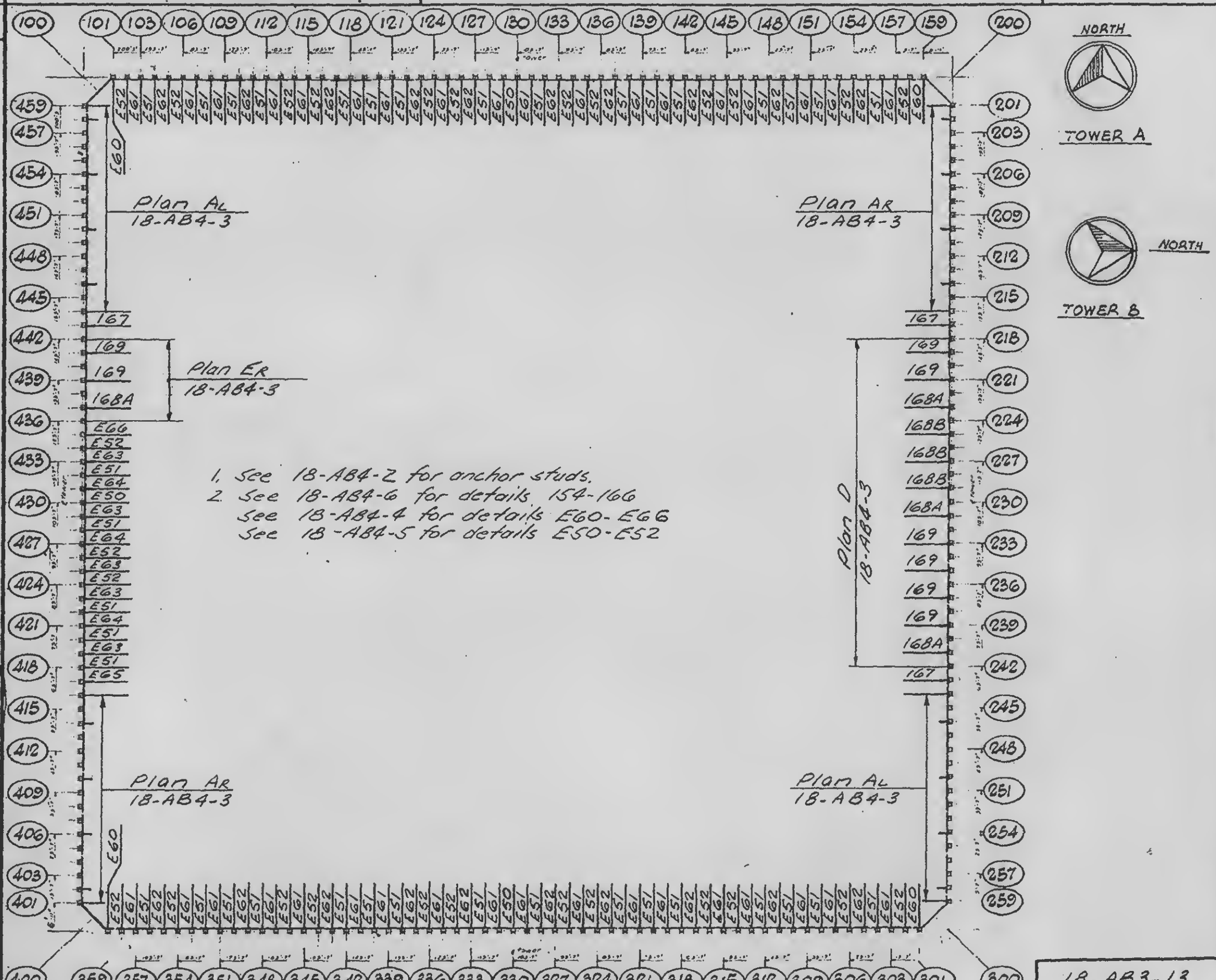
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOOR 79

DATE: 2-7-69

VISIONS



1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details 154-166
   See 18-AB4-4 for details E60-E66
   See 18-AB4-5 for details E50-E52

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED S. Karp

DRAWN A. Franqui

REVIEWED [illegible]

18-AB3-13

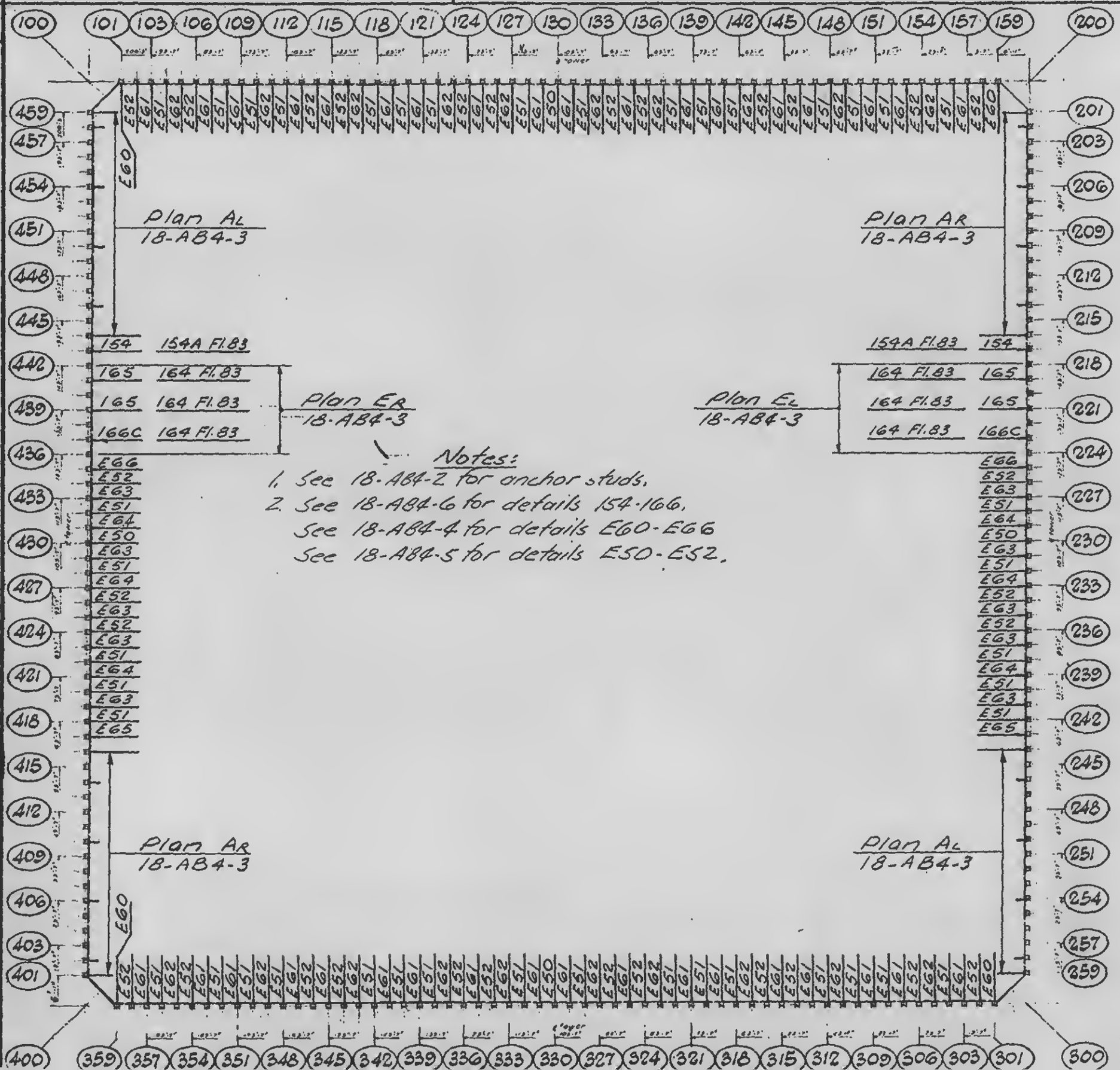
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

TITLE: ANCHOR PLATE KEY PLAN FLOORS 80-83

DATE: 2-7-69

SIONS



Notes:

1. See 18-AB4-2 for anchor studs.
2. See 18-AB4-6 for details 154-166.
   See 18-AB4-4 for details E60-E66
   See 18-AB4-5 for details E50-E52.

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. Karp

DRAWN A. Franqui

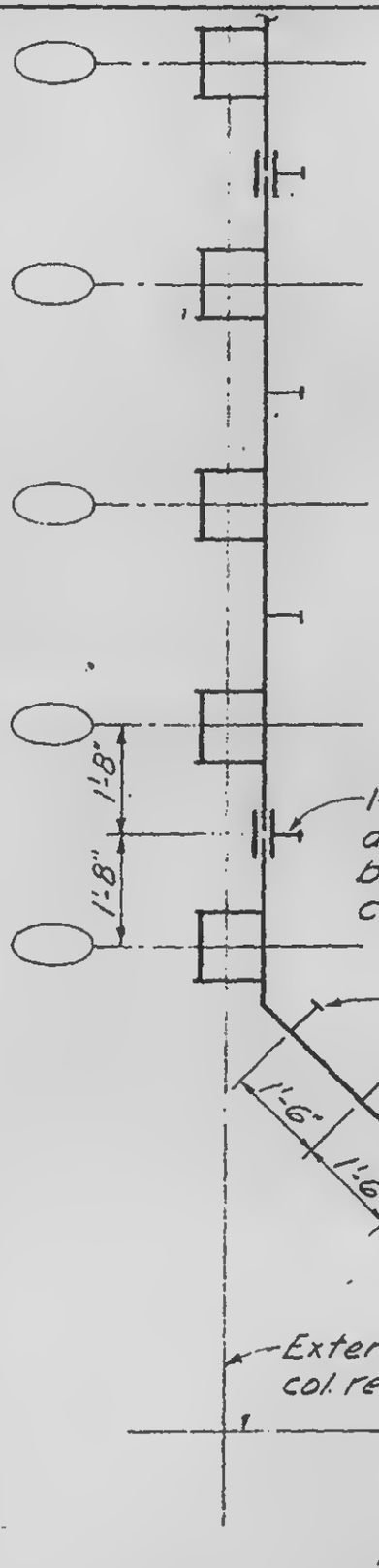
REVIEWED

18-AB3-14

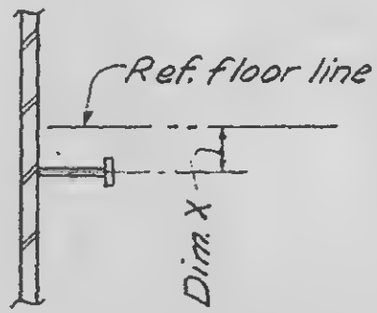
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER | TITLE ANCHOR DETAILS AT EXTERIOR WALL | DATE 2-7-69

SIONS



Plan



Floor	Dim. X
7	5"
9	4"
10-40	2"
41	5"
43	4"
44-74	2"
75	5"
77	4"
78-106	2"
107	2'-2"*

* 2" below top of Structural slab

LICENSED PROFESSIONAL ENGINEER LESLIE E. ROBERTSON No. 34360 UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED J. Karp

DRAWN A. FRANQUI

REVIEWED [illegible]

TYPICAL ARRANGEMENT OF ANCHOR DETAILS AT EXTERIOR WALL OF BUILDING

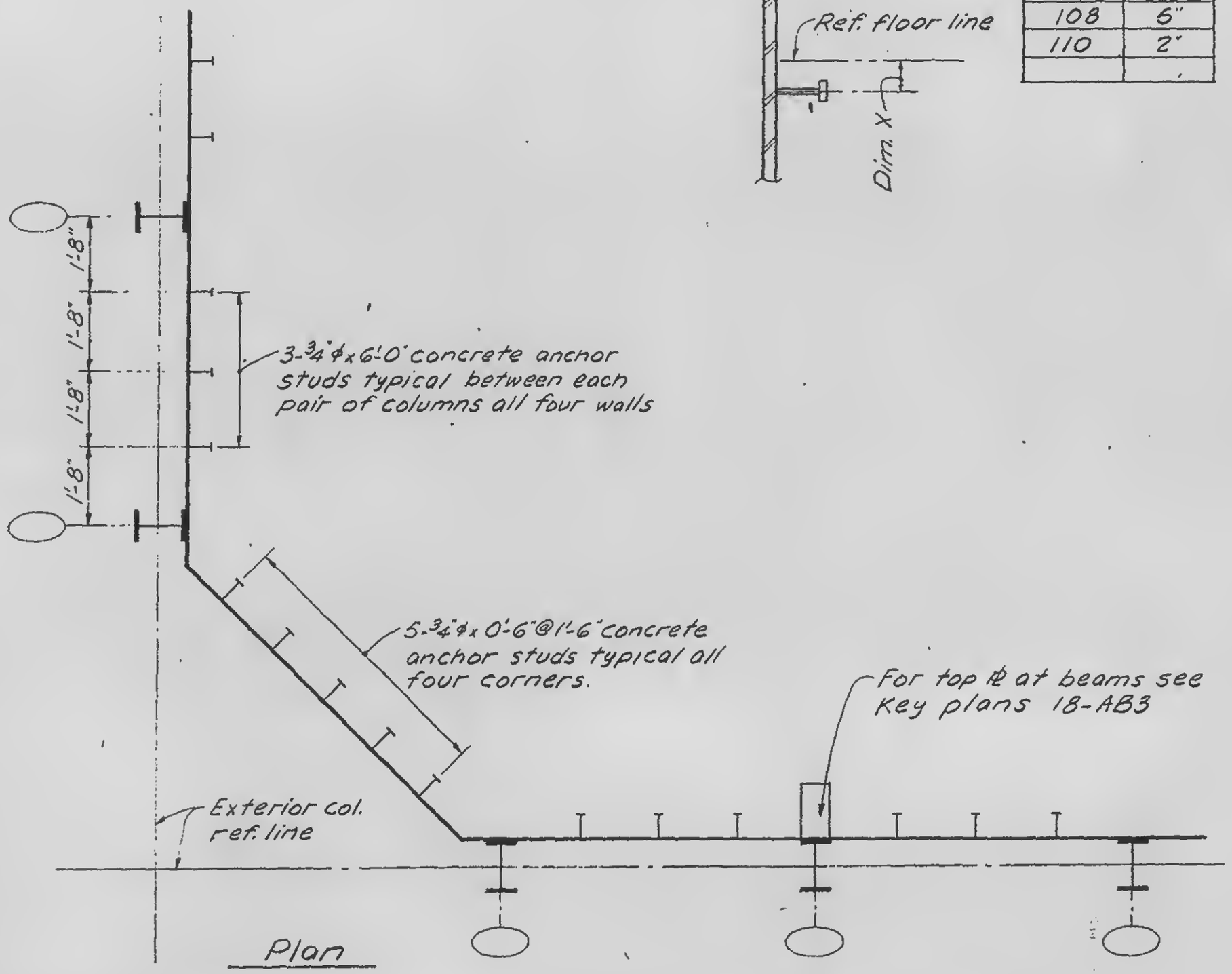
For floors covered see Schedule

18-AB4-2.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR DETAILS AT EXTERIOR WALL | DATE: 2-7-69

REVISIONS



Floor	Dim. X
108	5"
110	2"

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

DESIGNED S. Karp
DRAWN A. FRANQUI
REVIEWED

TYPICAL ARRANGEMENT OF ANCHOR DETAILS AT EXTERIOR WALL OF BUILDING
For floors covered see schedule

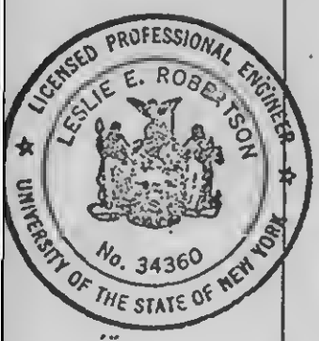
18-AB4-2.2

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT	TITLE	DATE
THE WORLD TRADE CENTER	ANCHOR DETAILS - EXTERIOR WALL - INDEX	11/ 7/69

REVISIONS

18-A84- 1 INDEX
18-A84- 2.1 ANCHOR DETAILS AT EXTERIOR WALL
18-A84- 2.2 ANCHOR DETAILS AT EXTERIOR WALL
18-A84- 3.1 DETAIL PLANS A, B
18-A84- 3.2 DETAIL PLAN C
18-A84- 3.3 DETAIL PLANS D, E, F
18-A84- 4.1 DETAILS E61 - E67
18-A84- 4.2 DETAILS E60, E69
18-A84- 4.3 DETAILS E68, E68A
18-A84- 4.4 DETAILS E70, E70A, E71, E71A, E74
18-A84- 4.5 DETAILS E75, E75A
18-A84- 5.1 DETAILS E50, E51, E52, E80 - E83
18-A84- 5.2 DETAILS E40, E42, E45, E53 - E55
18-A84- 5.3 DETAILS E44, E56 - E59, E84
18-A84- 5.4 SECTIONS
18-A84- 5.5 DETAILS E51D, E52D
18-A84- 5.6 DETAIL E 54A
18-A84- 5.7 DETAIL E 59A
18-A84- 6.1 DETAILS 159, 160, 161, 163C
18-A84- 6.2 DETAILS 150 -158, 162, 163A, 163B, 164 - 169
18-A84- 7.1 DETAILS 8.4, 8.10, 8.X
18-A84- 7.2 DETAIL 10.1
18-A84- 7.3 DETAILS 10.2, 10.3, 10.4
18-A84- 8.1 DETAILS 12.1,12.2,12.3,12.4,12.5,12.9,12.10
18-A84- 8.2 DETAILS 12.6, 12.7, 12.8
18-A84- 8.3 DETAIL 12.11
18-A84- 9 DETAILS 13.1, 13.2, 13.3
18-A84- 10.1 STUD DETAILS A & D
18-A84- 10.2 STUD DETAILS B, C, & E & F

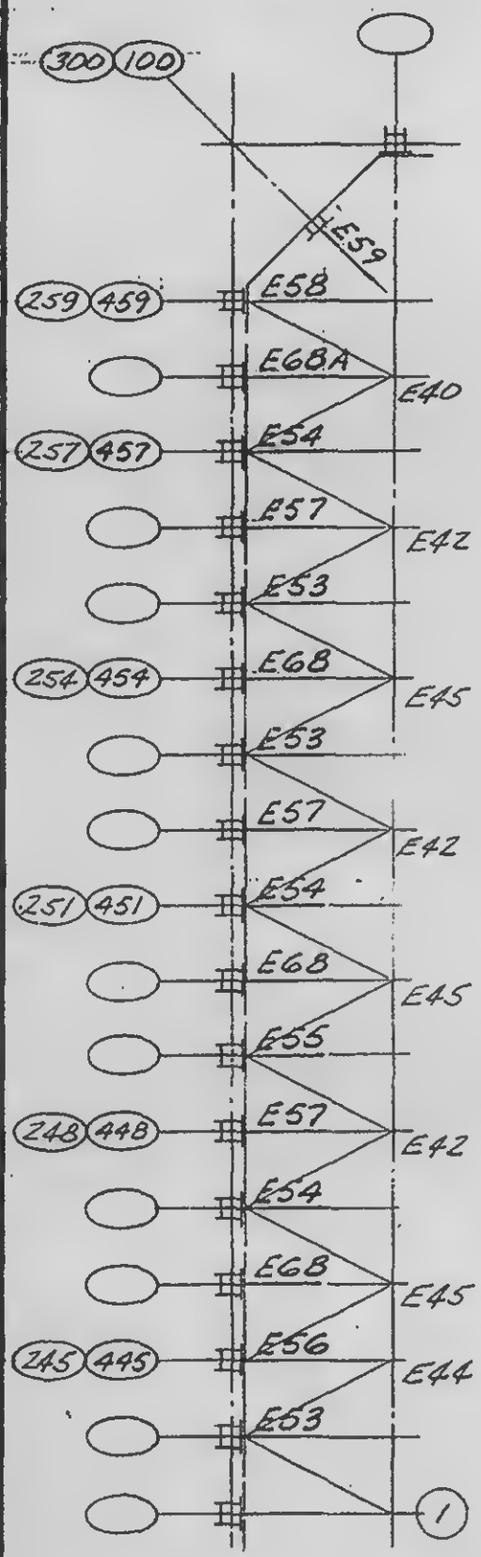


SKILLING HELLE CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

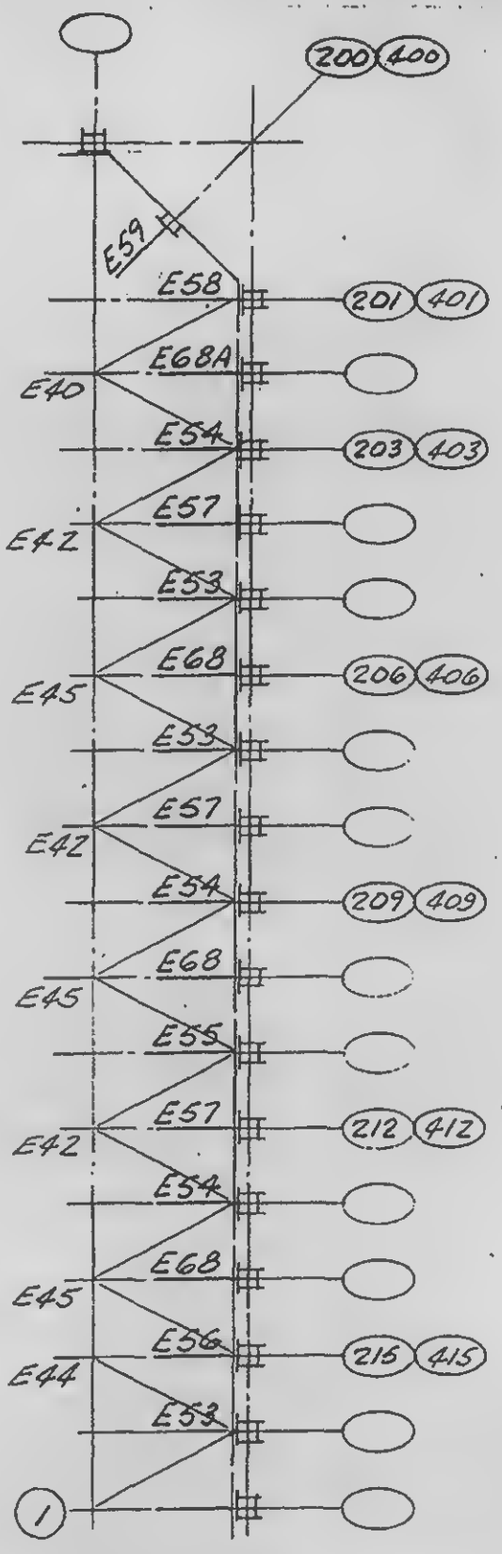
PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR DETAILS - EXTERIOR WALL - DETAIL PLANS A & B | DATE: 2-15-67

REVISIONS

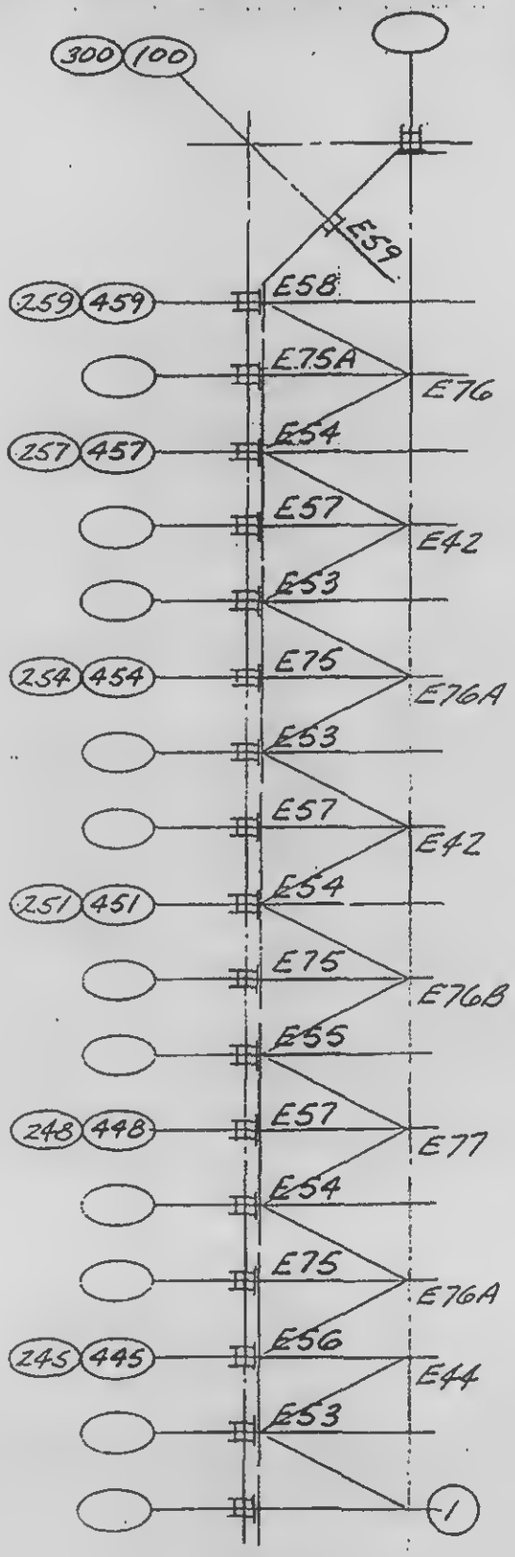
See 18-A84-5 for details indicated.



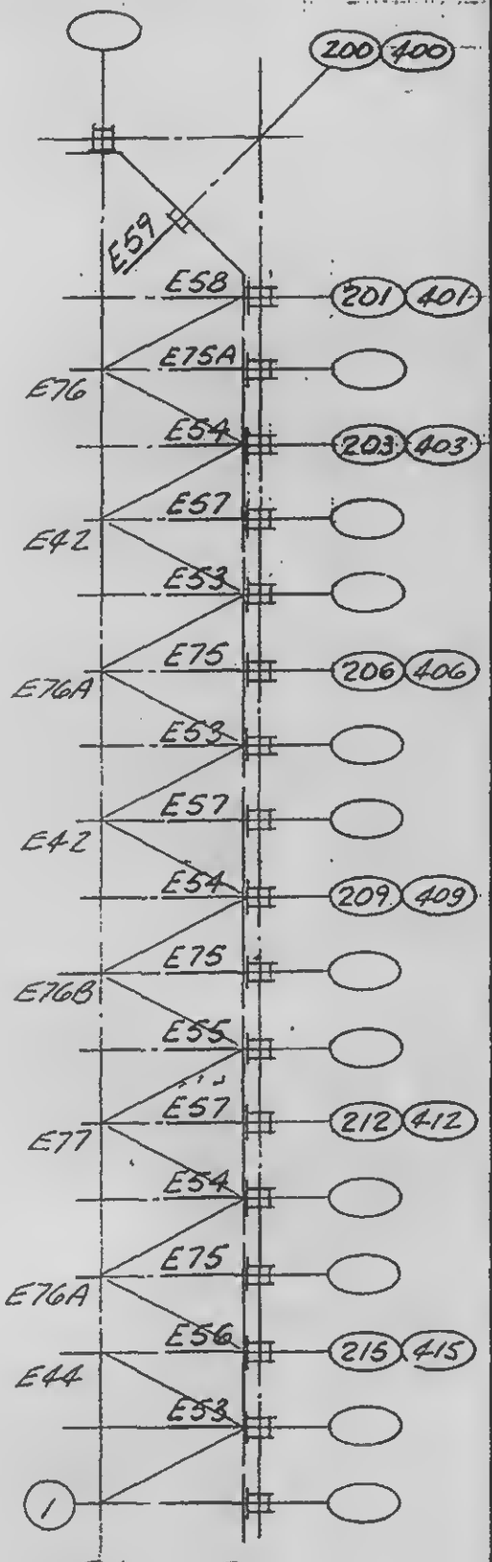
Plan AL



Plan AR



Plan BL



Plan BR

Note 1: E83 except where Plan 5 or E are adjacent use Detail E82.

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
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CITY OF THE STATE OF NEW YORK

DESIGNED J. Karp
DRAWN J. Adams
REVIEWED W. Brewer

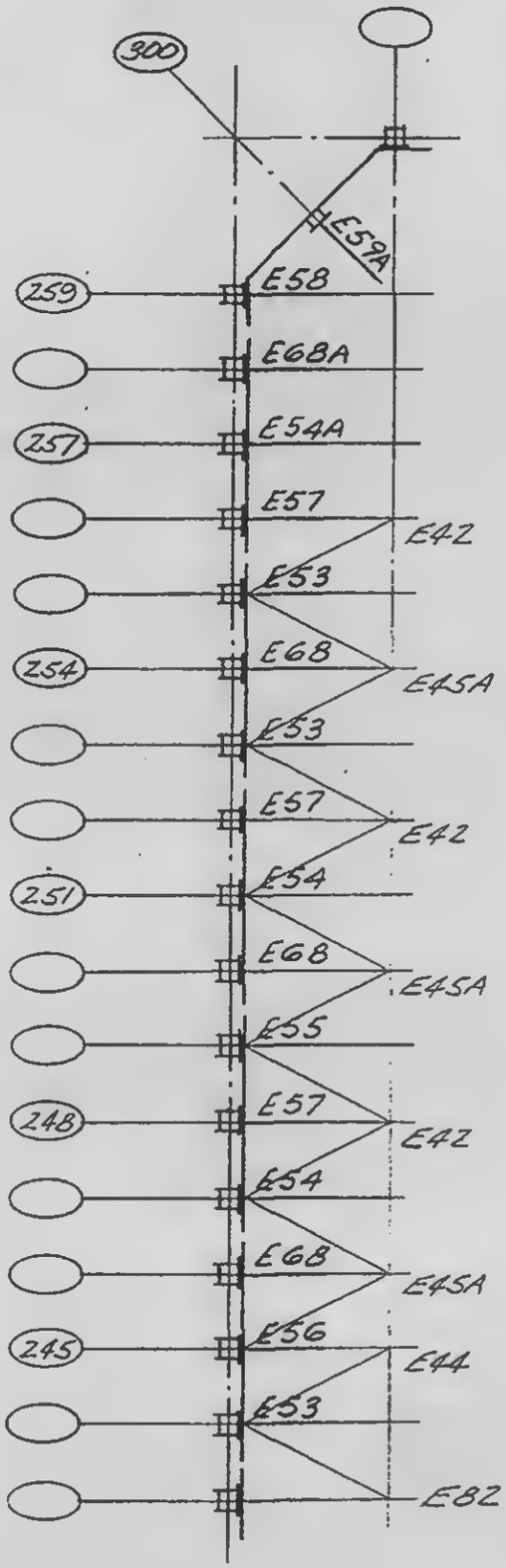
18-A84-3.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

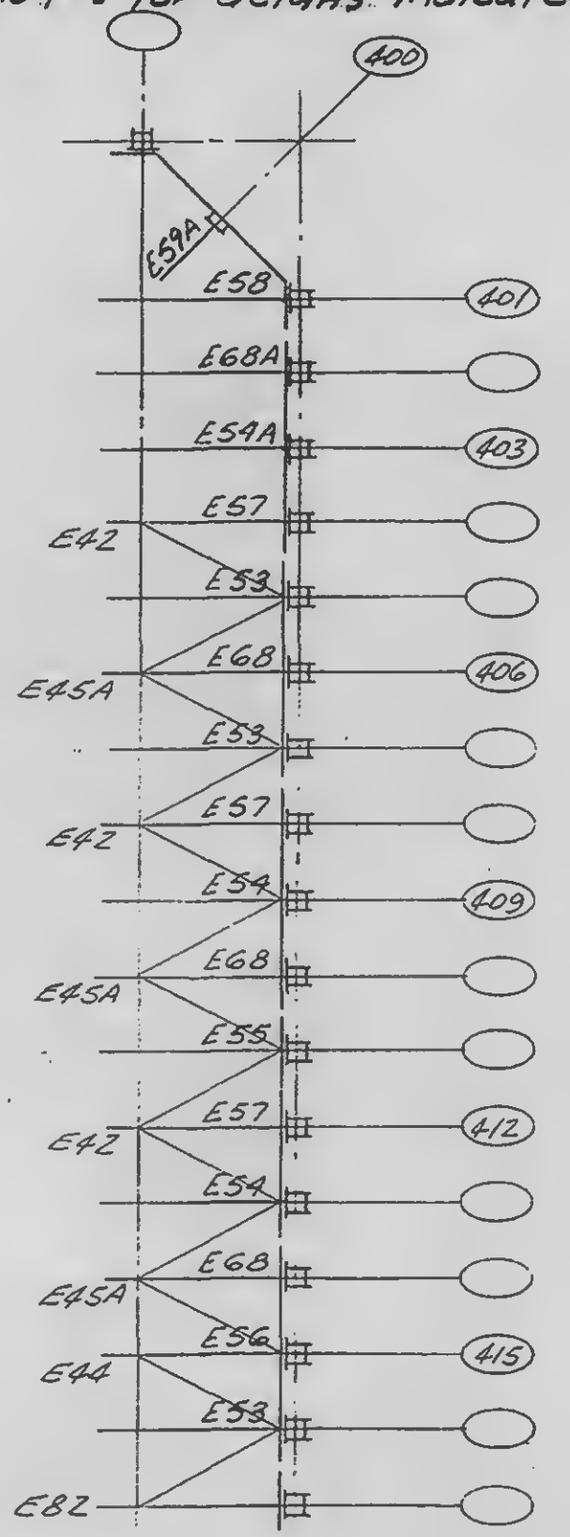
PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR DETAILS-EXTERIOR WALL DETAIL PLAN C | DATE: 2-7-69

REVISIONS

See 18-AB4-5 for details indicated



Plan CL



Plan CR

DESIGNED: W. Karp
DRAWN: J. Adams
REVIEWED: W. Brewer

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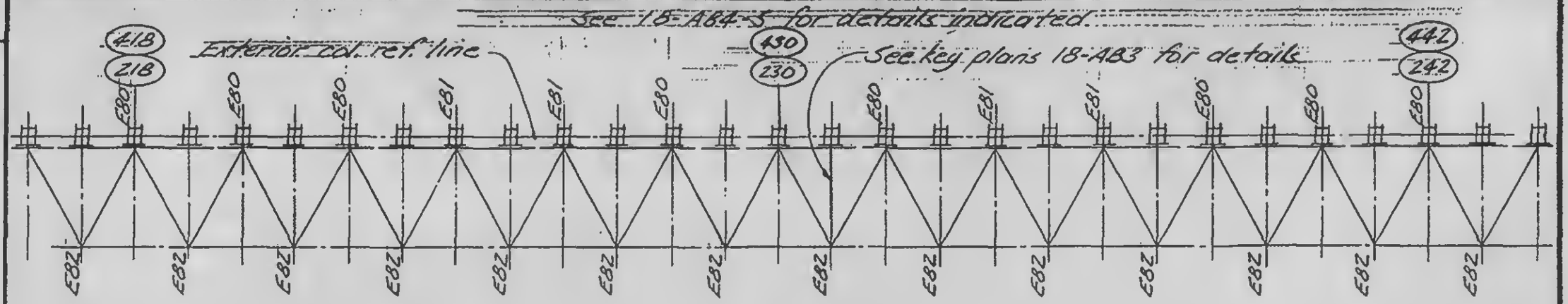
1E-AB4-3.2

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

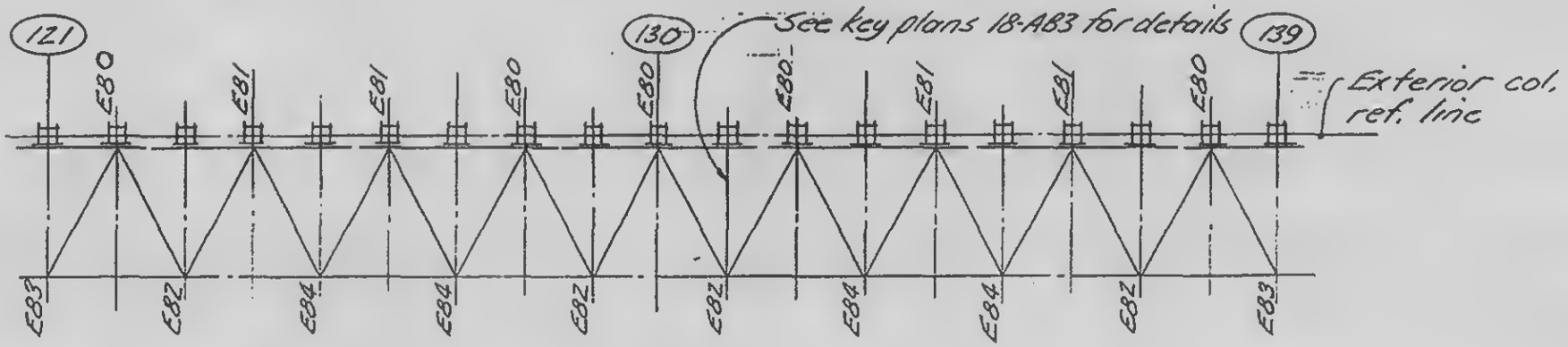
PROJECT: THE WORLD TRADE CENTER | TITLE: ANCHOR DETAILS-EXTERIOR WALL DETAIL PLANS D, E, F | DATE: 2-1-69

REVISIONS

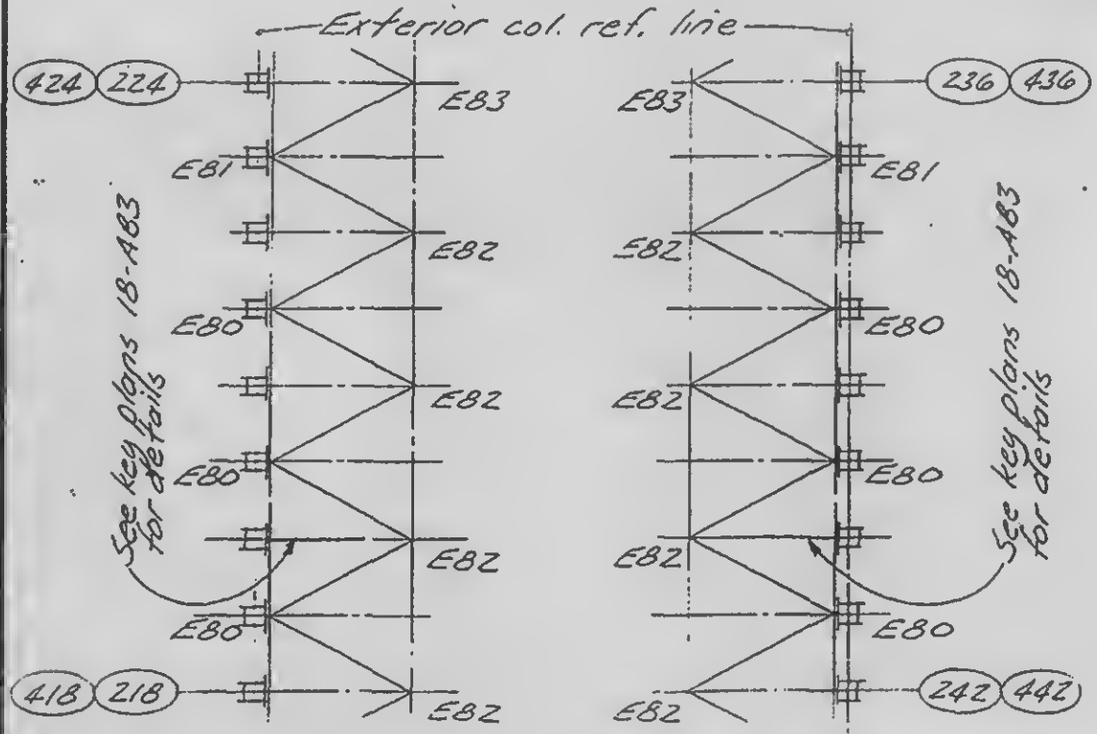
See 18-A84-3 for details indicated.



Plan D



Plan F



Plan EL

Plan ER

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UNIVERSITY OF THE STATE OF NEW YORK

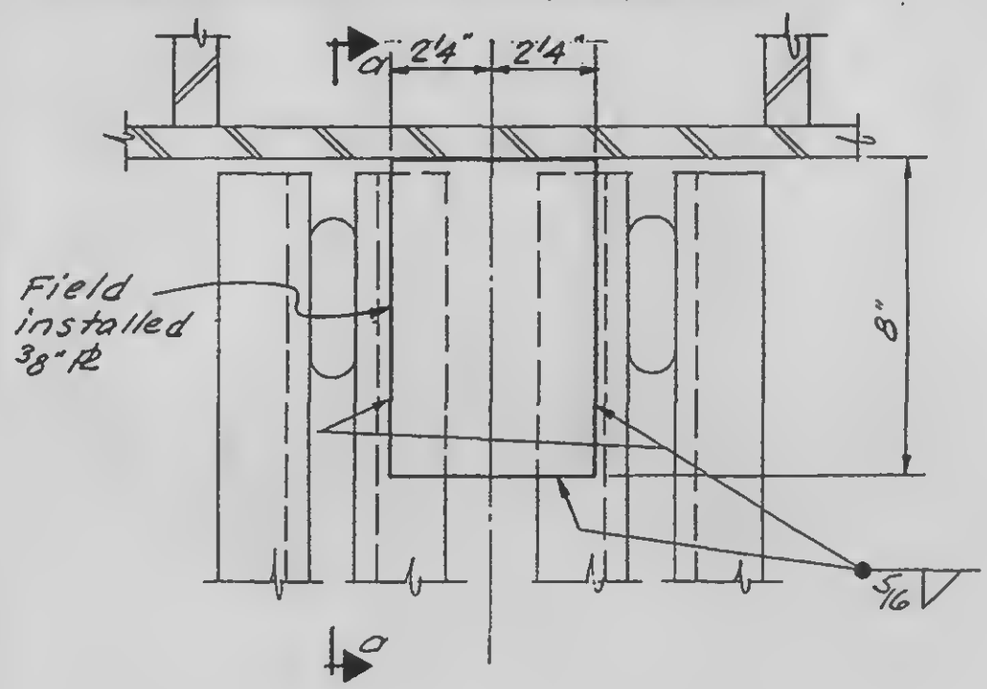
DESIGNED S. Karp
DRAWN J. Adams
REVIEWED W. Brewer

18-A84-3.3

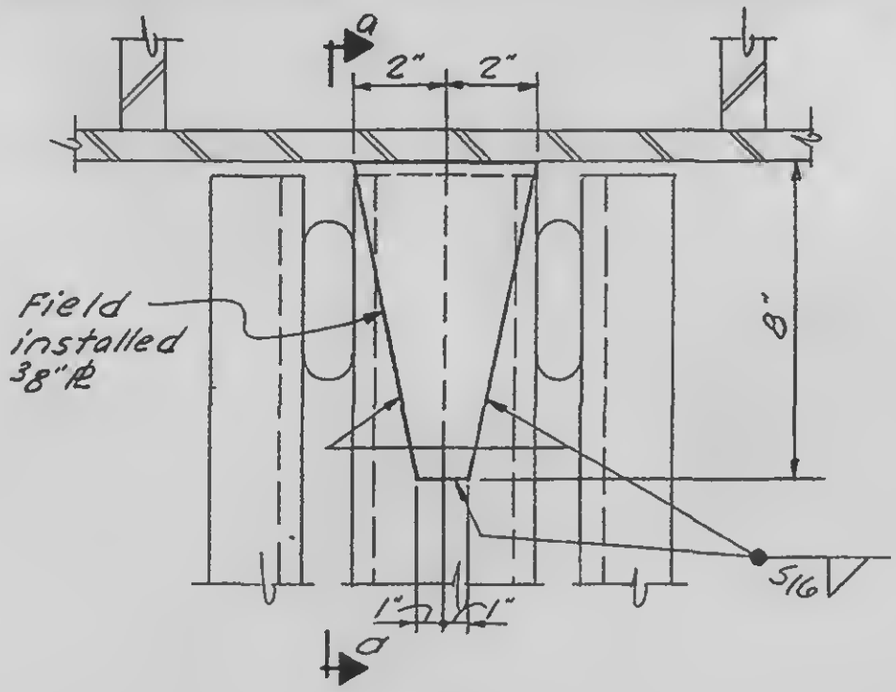
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS E61 - E67 | DATE: 2-7-69

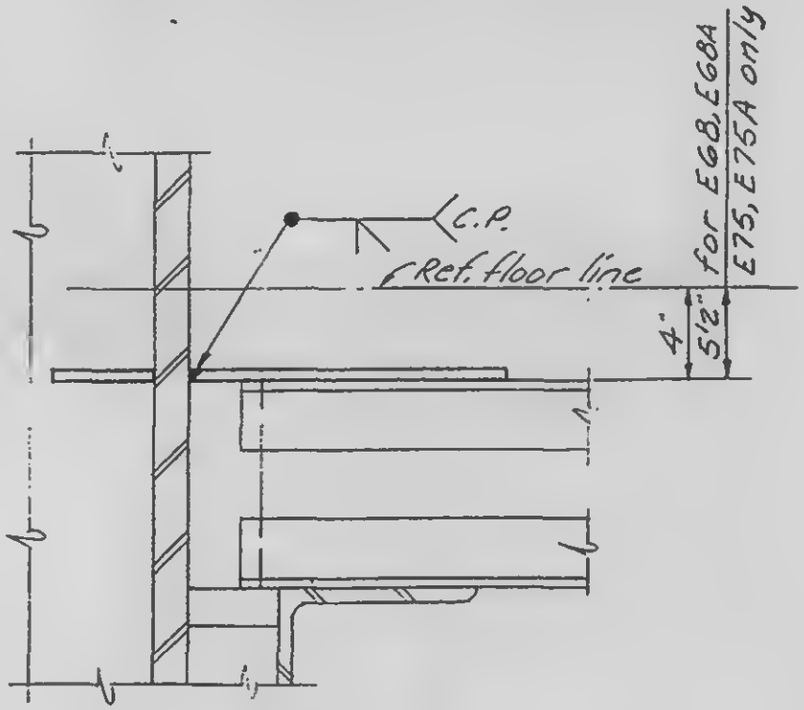
REVISIONS



Detail E61, E62, E65, E67



Detail E63, E64, E66



Section a-a

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UNIVERSITY OF THE STATE OF NEW YORK

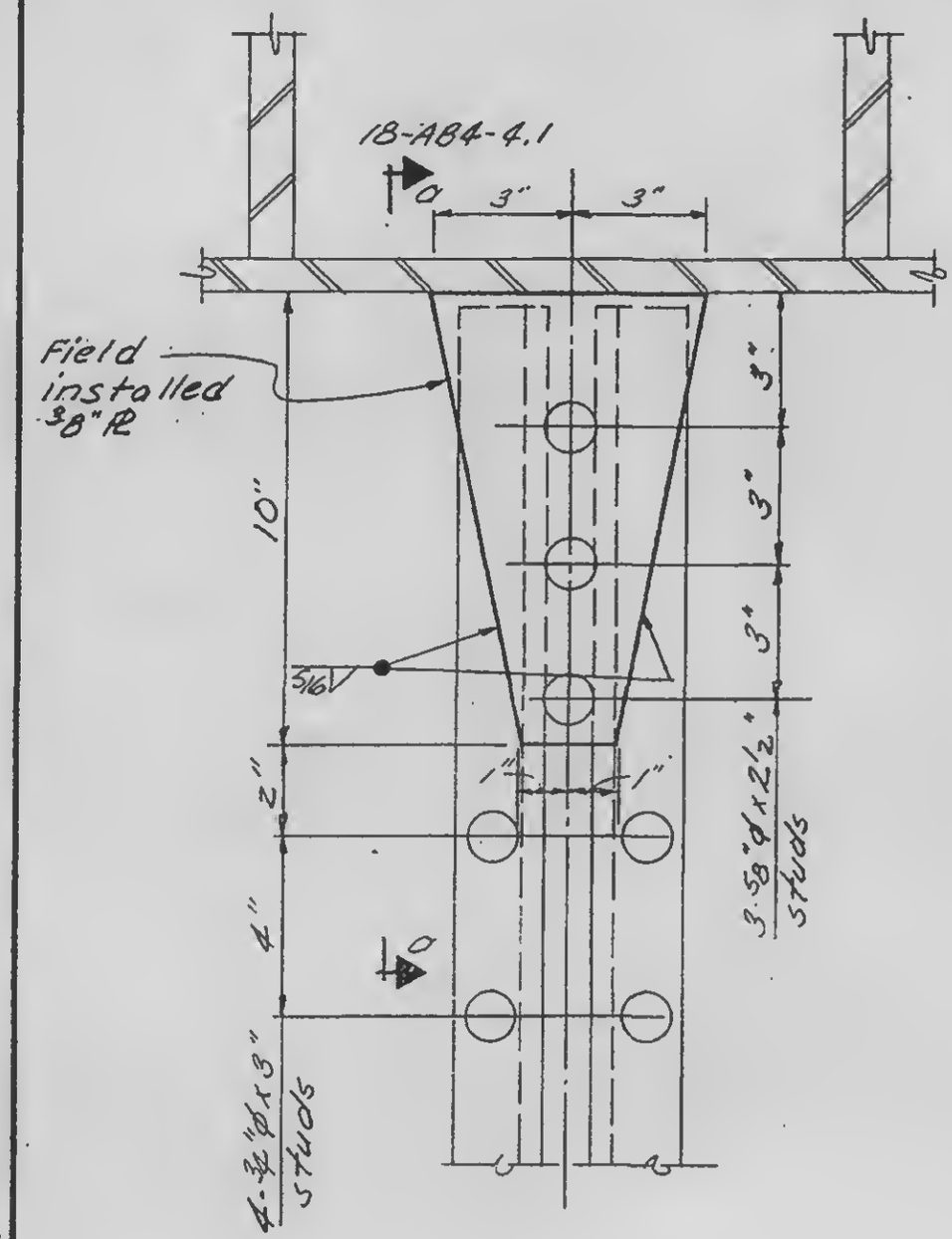
SIGNED
J. Harp
DRAWN
Adams
REVIEWED
W. Brewer

18-AB4-4.1

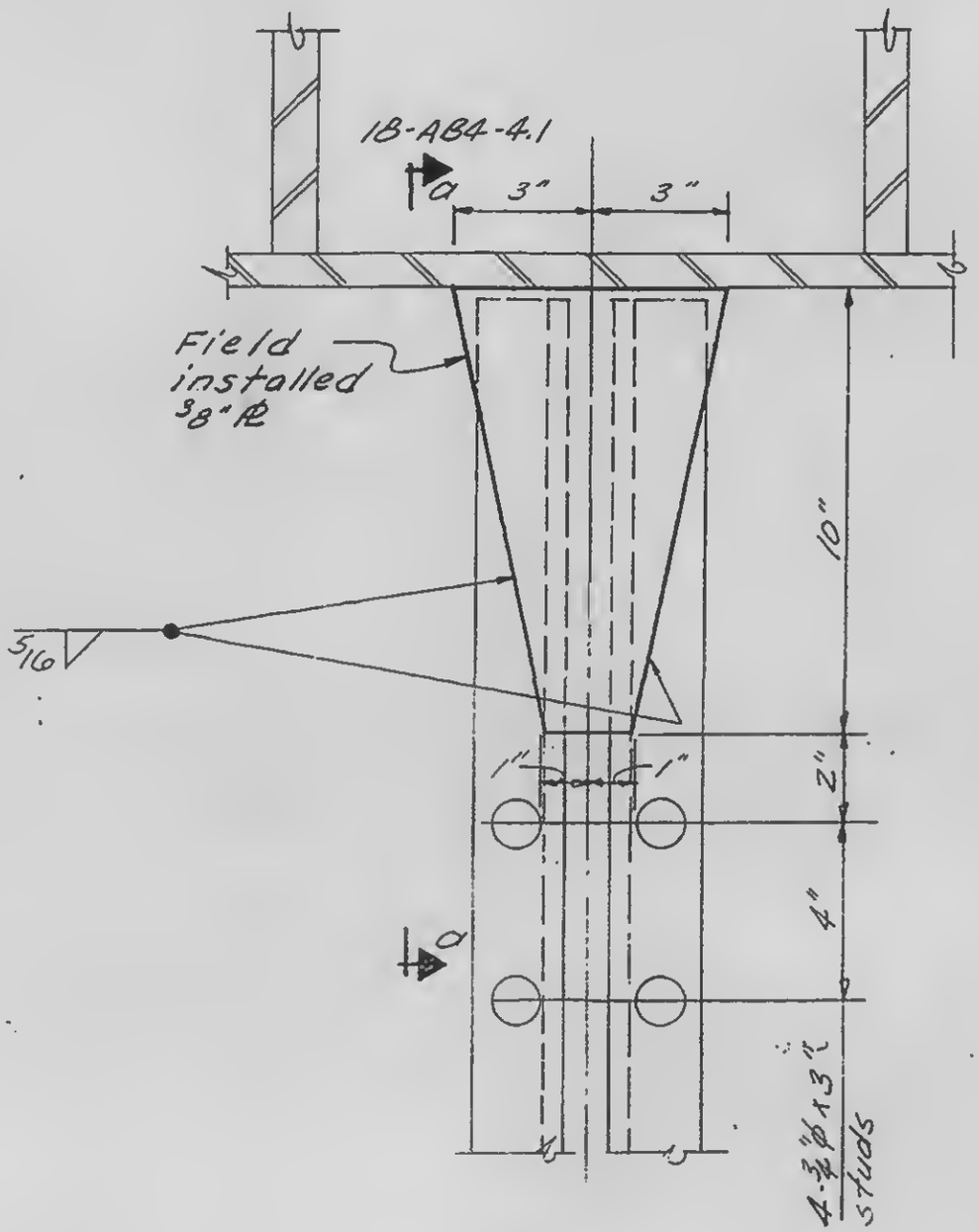
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS E60, E69 | DATE: 2-1-69

REVISIONS



E60



E69

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

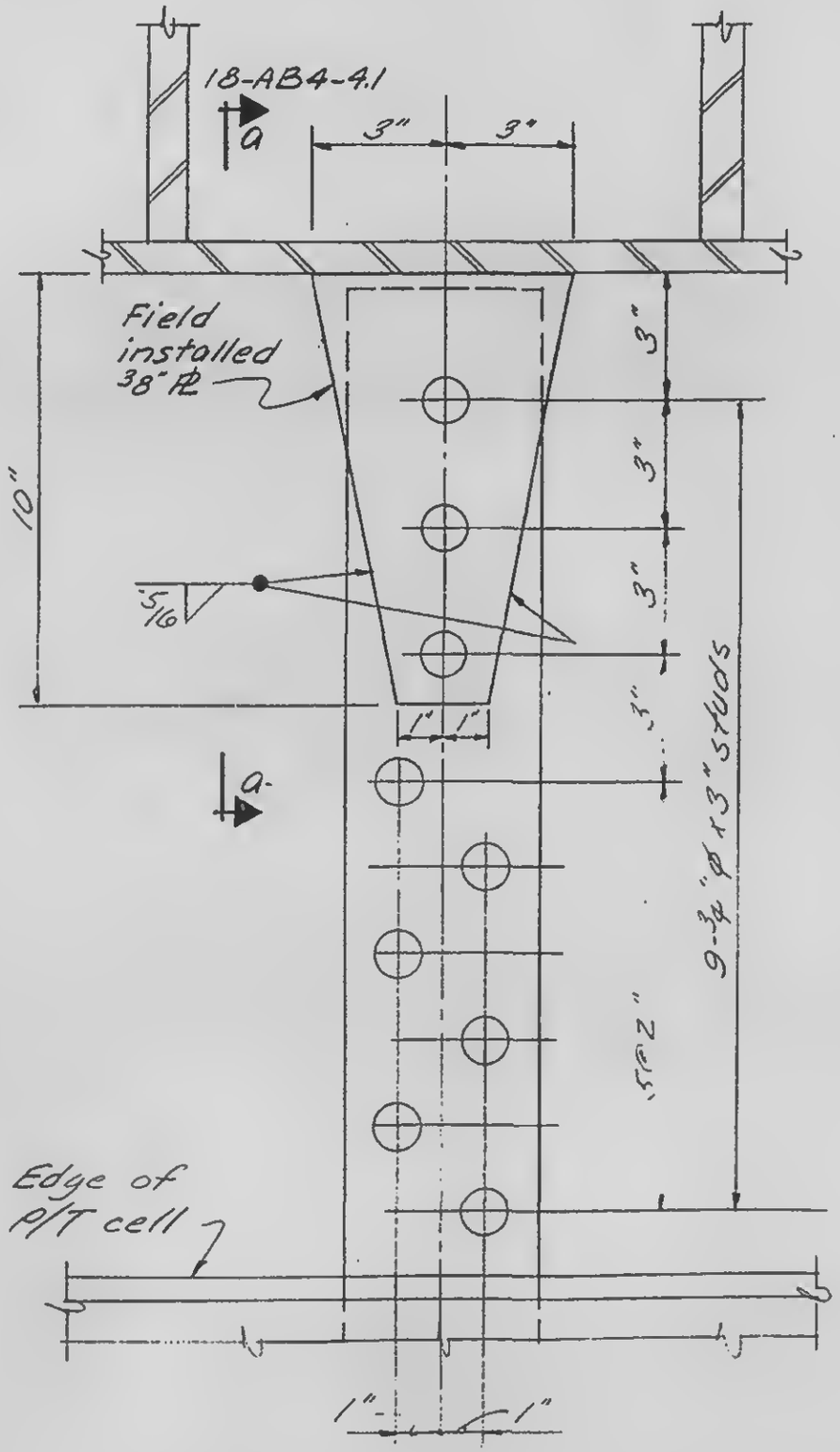
DESIGNED
E. Sharp
DRAWN
CHECKED
REVIEWED
W. J. Brewer

18-AB4-4.2

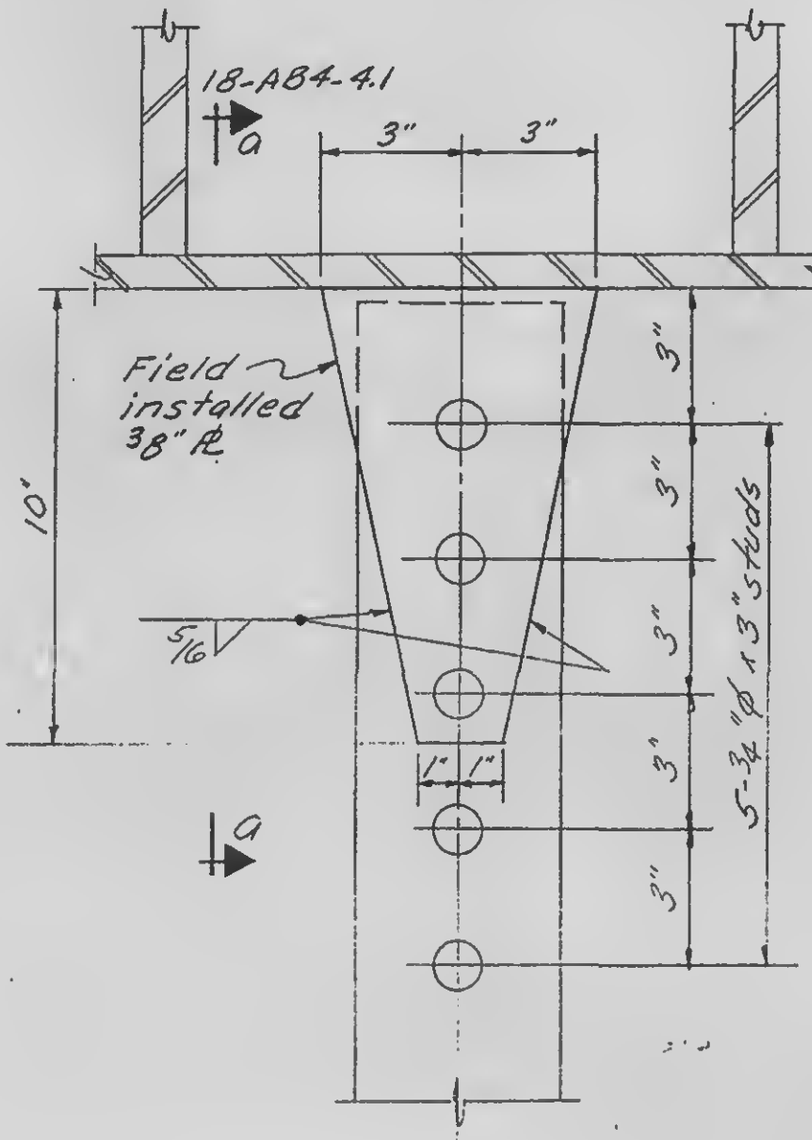
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS E68 AND E68A | DATE: 2-7-69

REVISIONS



E68



E68A

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
CITY OF THE STATE OF NEW YORK

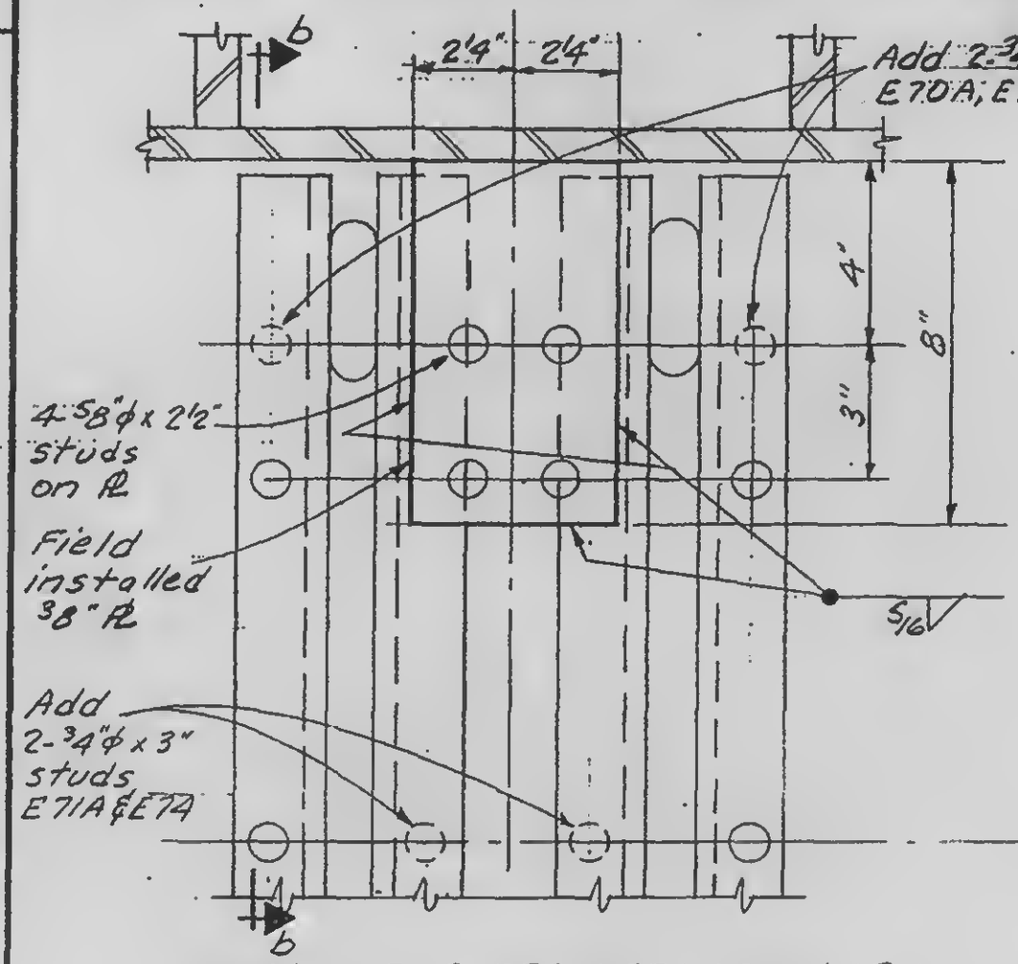
CHECKED: S. Sharp
DRAWN: A. Adams
REVIEWED: W. Brewer

18-AB4-4.3

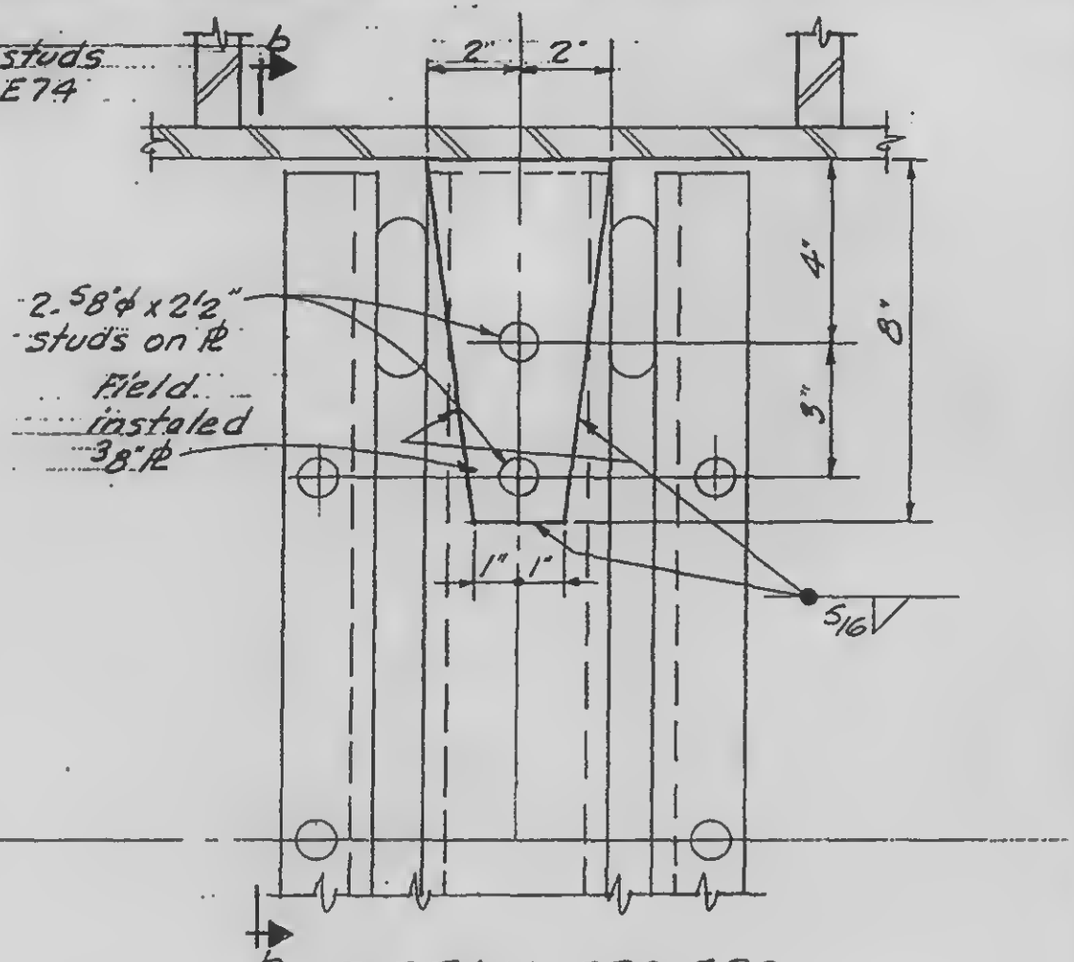
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS E70, E70A, E71, E71A, E74 | DATE: 2-7-69

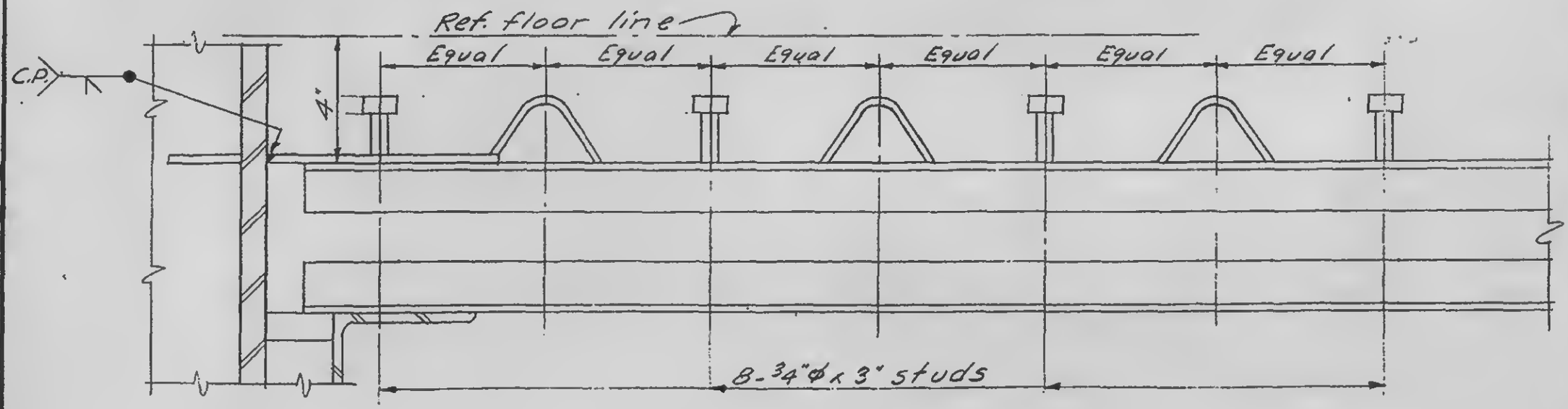
REVISIONS



DETAIL E70, E70A, E71, E71A & E74



DETAIL E72, E73



Section b-b

REGISTERED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
CITY OF THE STATE OF NEW YORK

DESIGNED S. Karp

DRAWN A. FRANQUI

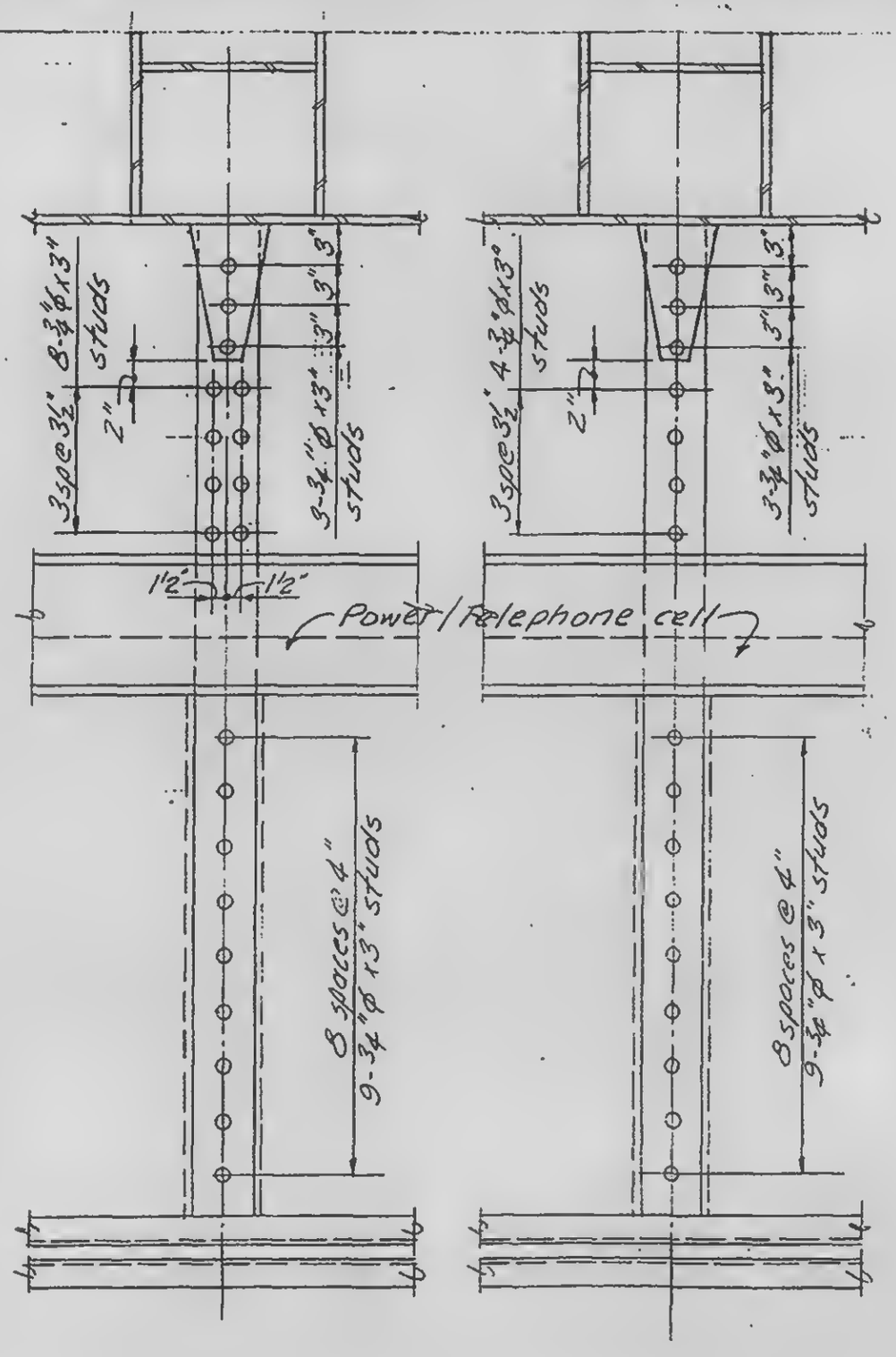
REVIEWED W. Brewer

18-AB4-4.4

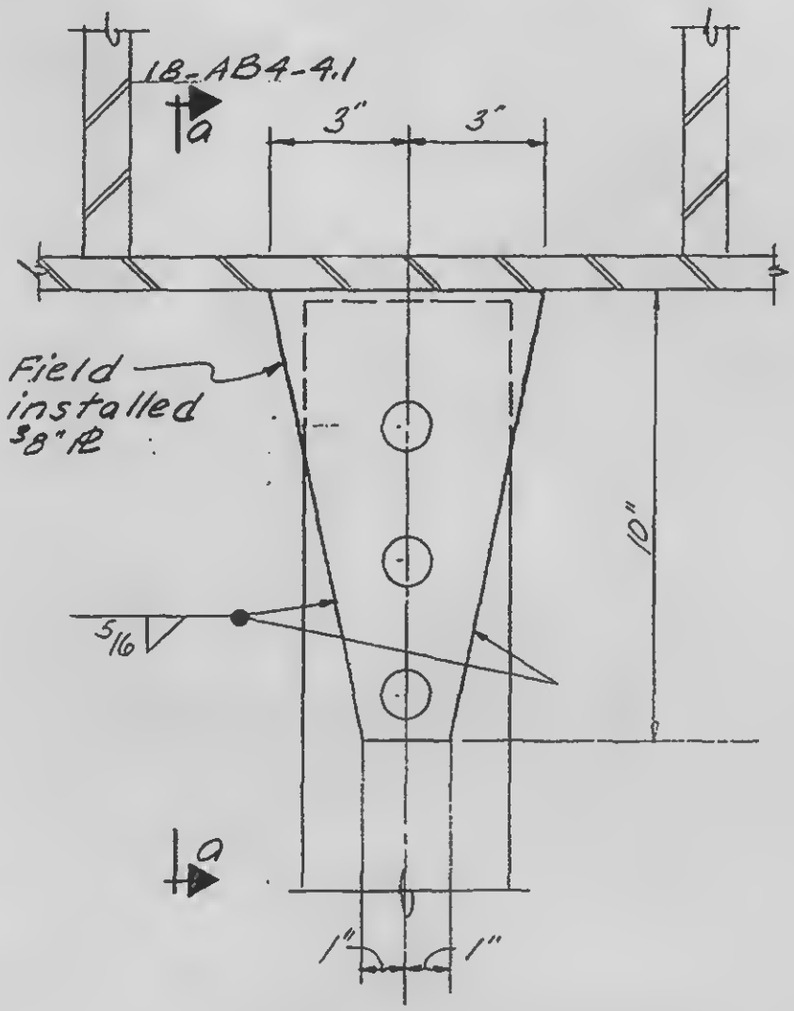
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS E75 AND E75A | DATE: 2-7-69

REVISIONS



E75 E75A



Detail E75, E75A

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SIGNED S. Karp

DRAWN A. Adams

REVIEWED W. Brewer

1B-AB4-4.5

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS E50, E51, E52, E80, E81, E82, E83 | DATE: 2-11-69

VISIONS

1½" straps from prefab. floor panels E50 & E51, field installed 1½" straps E 80.

4-5/8"x2½" studs @6" o.c.

4-5/8"x2½" studs @6" o.c.

5/16 ①

a

a

E50, E51, E80

1½" straps from prefab. floor panels E52, field installed 1½" straps E81.

4-5/8"x2½" studs @6" o.c.

4-5/8"x2½" studs @6" o.c.

5/16 ①

Ex1. col. ref. line

a

a

E52, E81

Ref. floor line

4"

Section a-a

Beam

5/16 ①

x

x

Field installed 1½" straps

Plan

4"

Section x-x

E 82

Beam at -4

Beam

5/16 ①

y

y

Field installed 1½" strap

Plan

4"

1½" or 2"

Section y-y

E 82

Beam at -5½ or 6

Prefab. floor panel

①

Strap shop installed on prefab panel.

E 83

Note ①
Min. length of weld 6".

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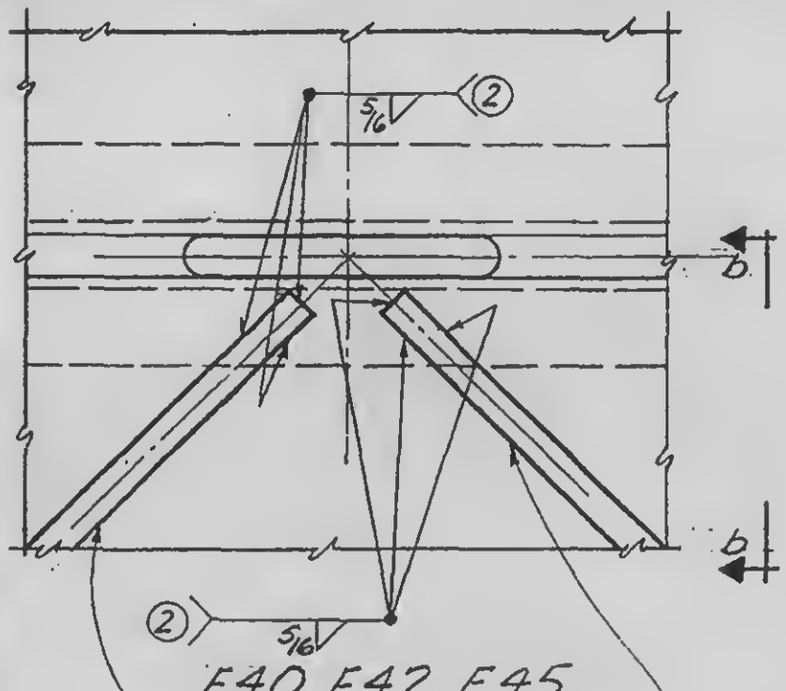
DESIGNED S. Karp
DRAWN A. FRANQUI
REVIEWED W. Brewer

18-AB4-5.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS E40, E42, E45, E53, E54, E55 | DATE: 2-1-68

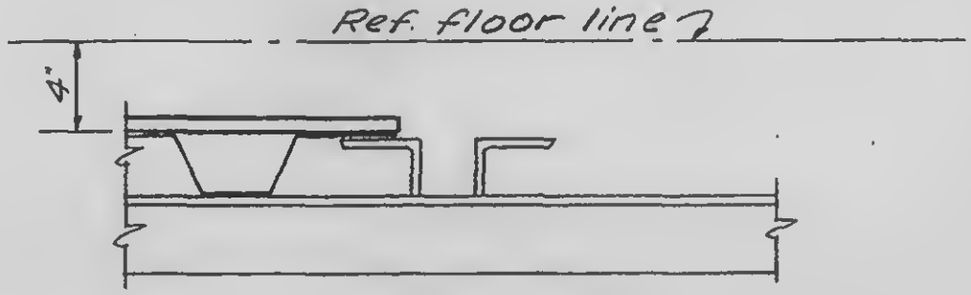
REVISIONS



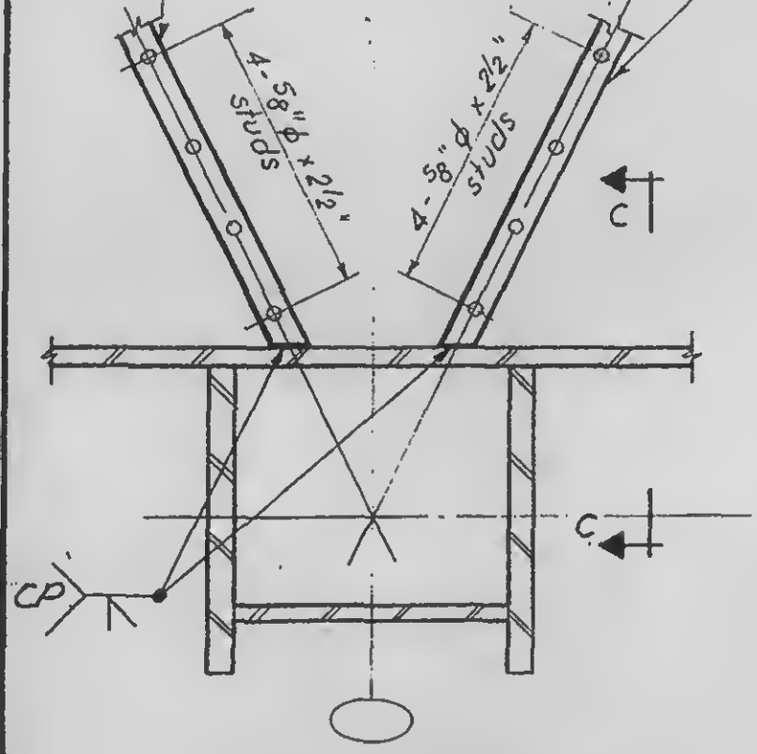
E40, E42, E45

Field installed 1½" straps

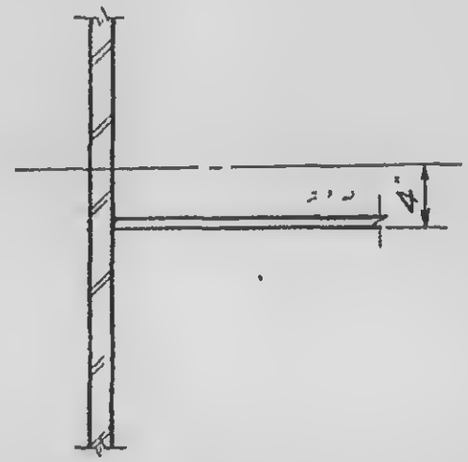
Note ②:
Minimum length of weld 4".



Section b-b



E53, E54, E 55



Section c-c

LICENSED PROFESSIONAL ENGINEER
LESLIE E. ROBERTSON
No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. Karp
DRAWN A. Franqui
REVIEWED W. Brewer

18-AB4-5.2

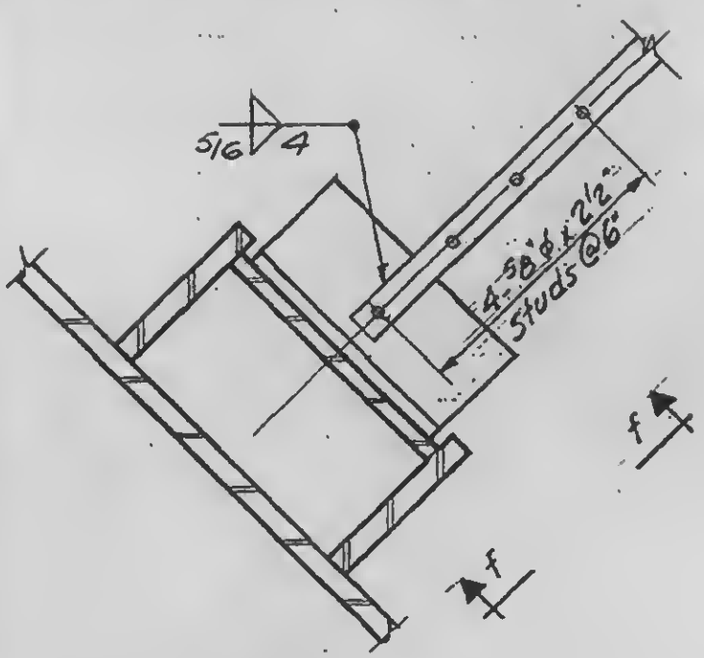
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER

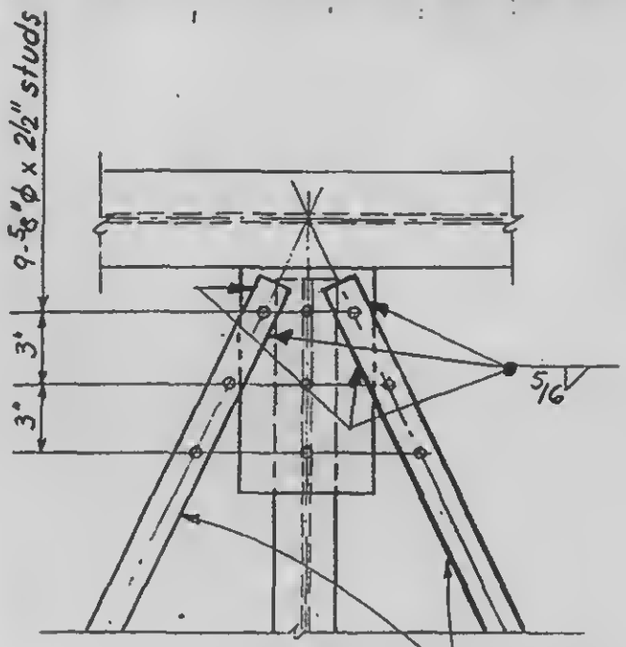
TITLE: DETAILS E44, E56, E57, E58, E59, E84

DATE: 7-17-69

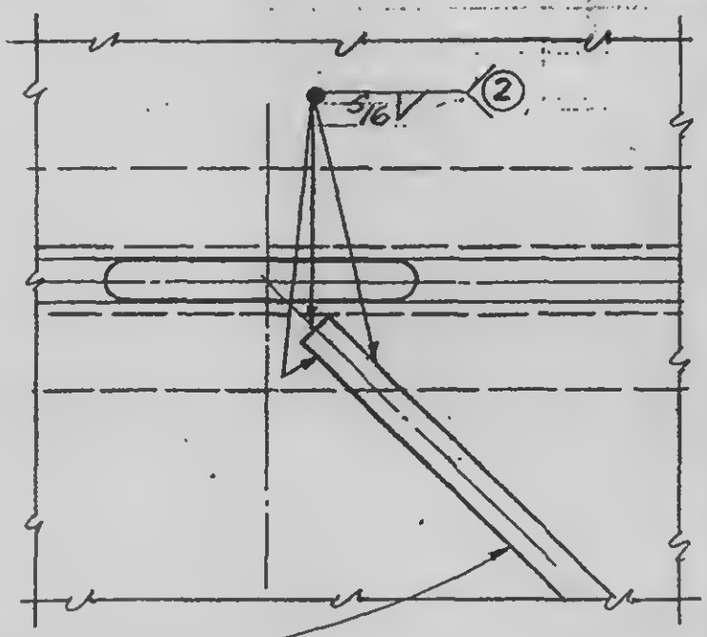
REVISIONS



E59



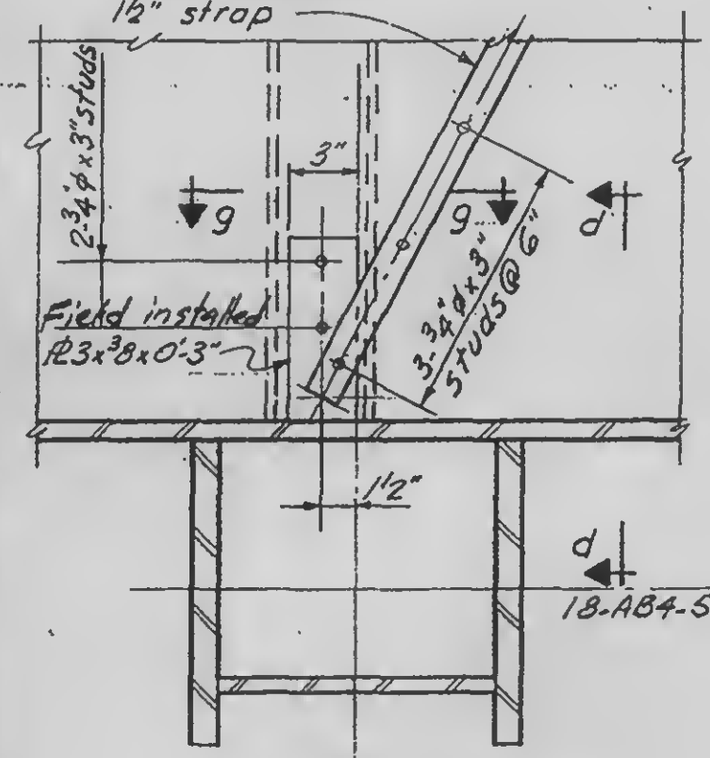
E 84



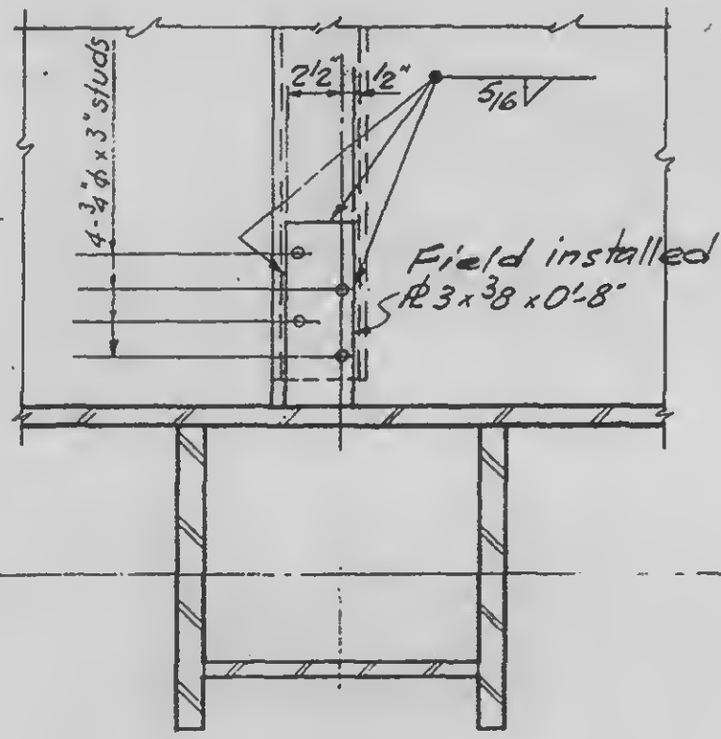
E44

Field installed
1½" straps

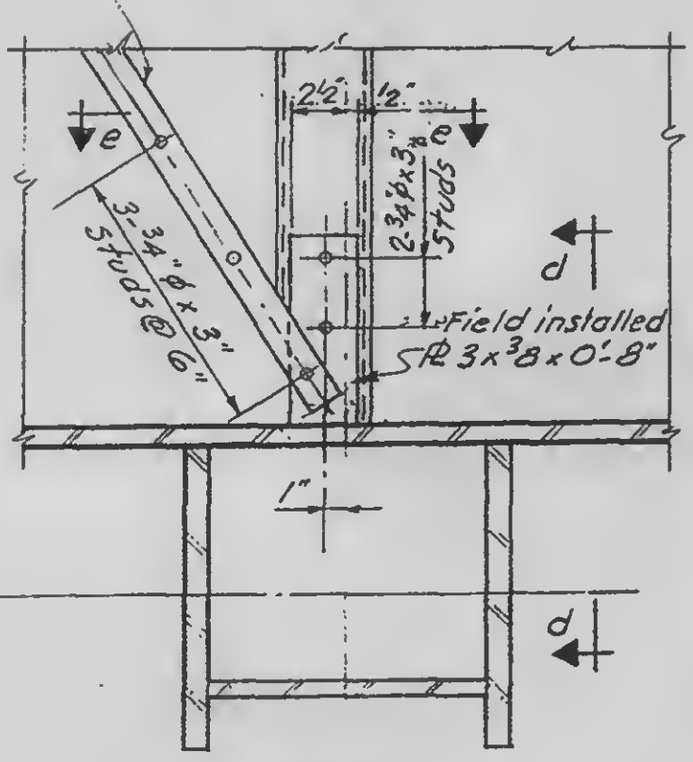
Field installed
1½" strap



E58



E57



E56

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UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. Karp

DRAWN A. Franqui

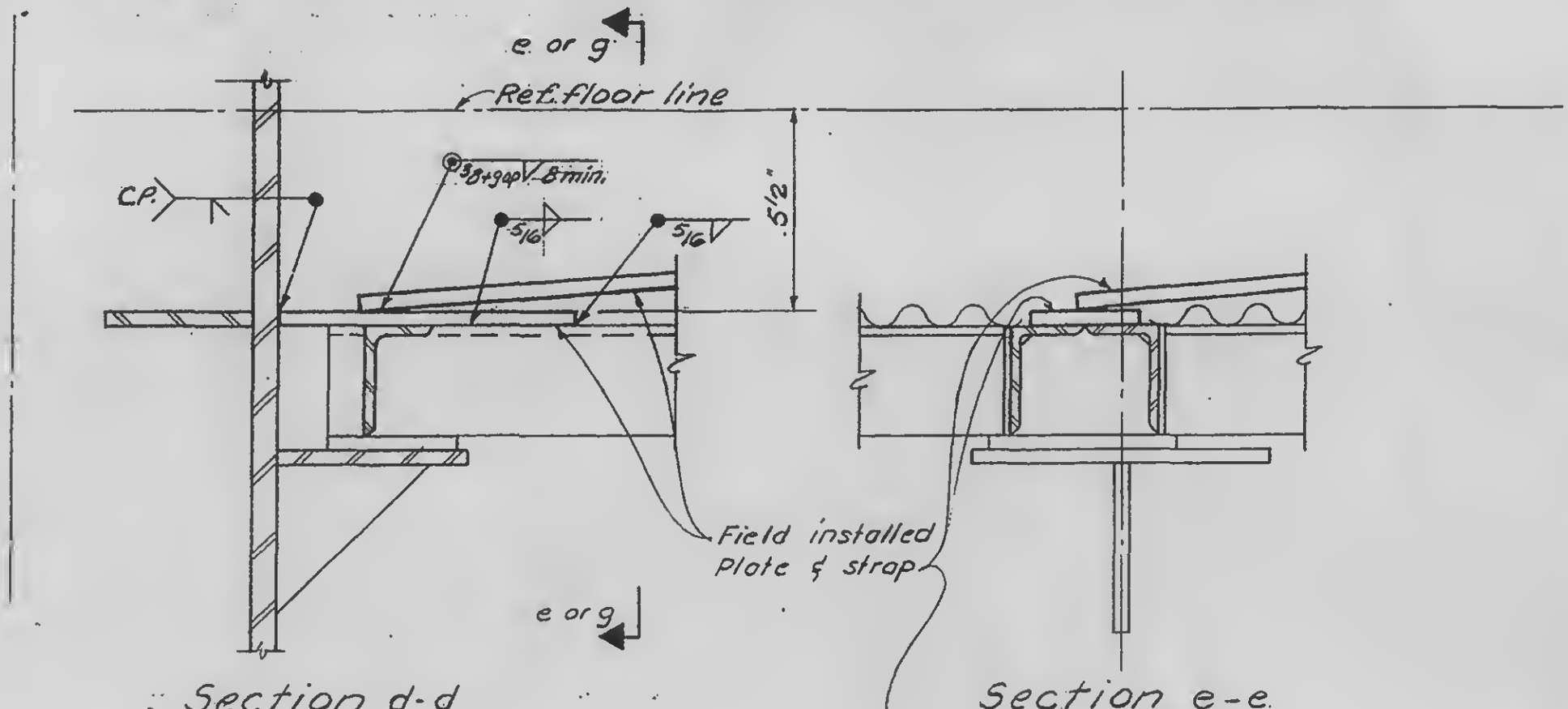
REVIEWED W. Brewer

18-AB4-5.3

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

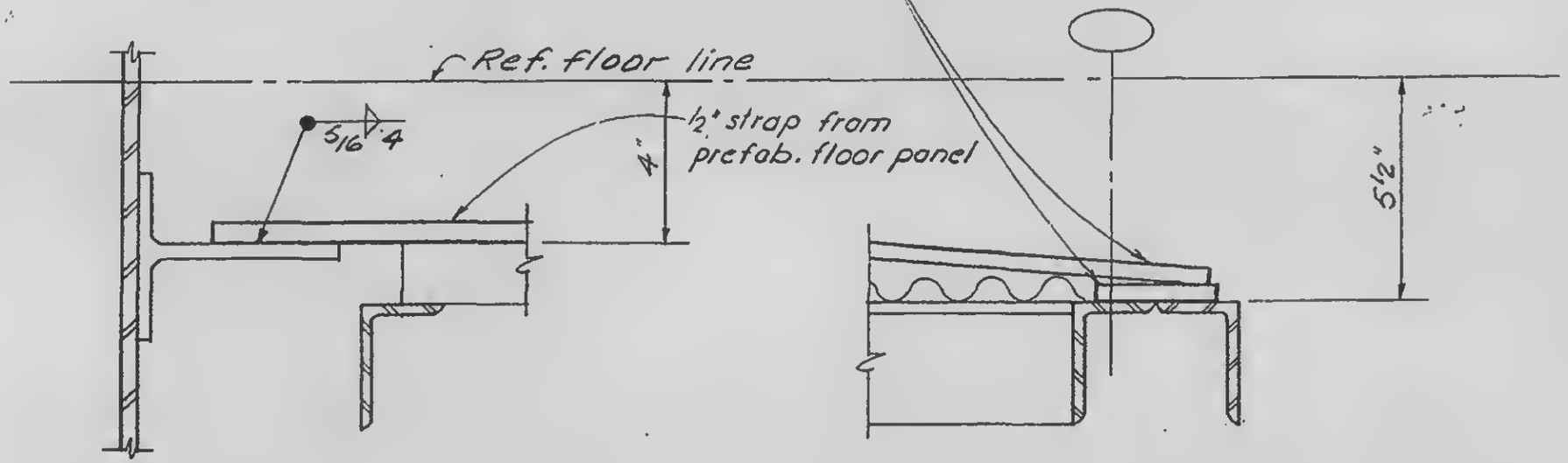
PROJECT: THE WORLD TRADE CENTER | TITLE: SECTIONS | DATE: 2-7-69

REVISIONS



Section d-d

Section e-e



Section f-f

Section g-g

LICENSED PROFESSIONAL ENGINEER
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No. 34960
UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. Karp

DRAWN A. Franqui

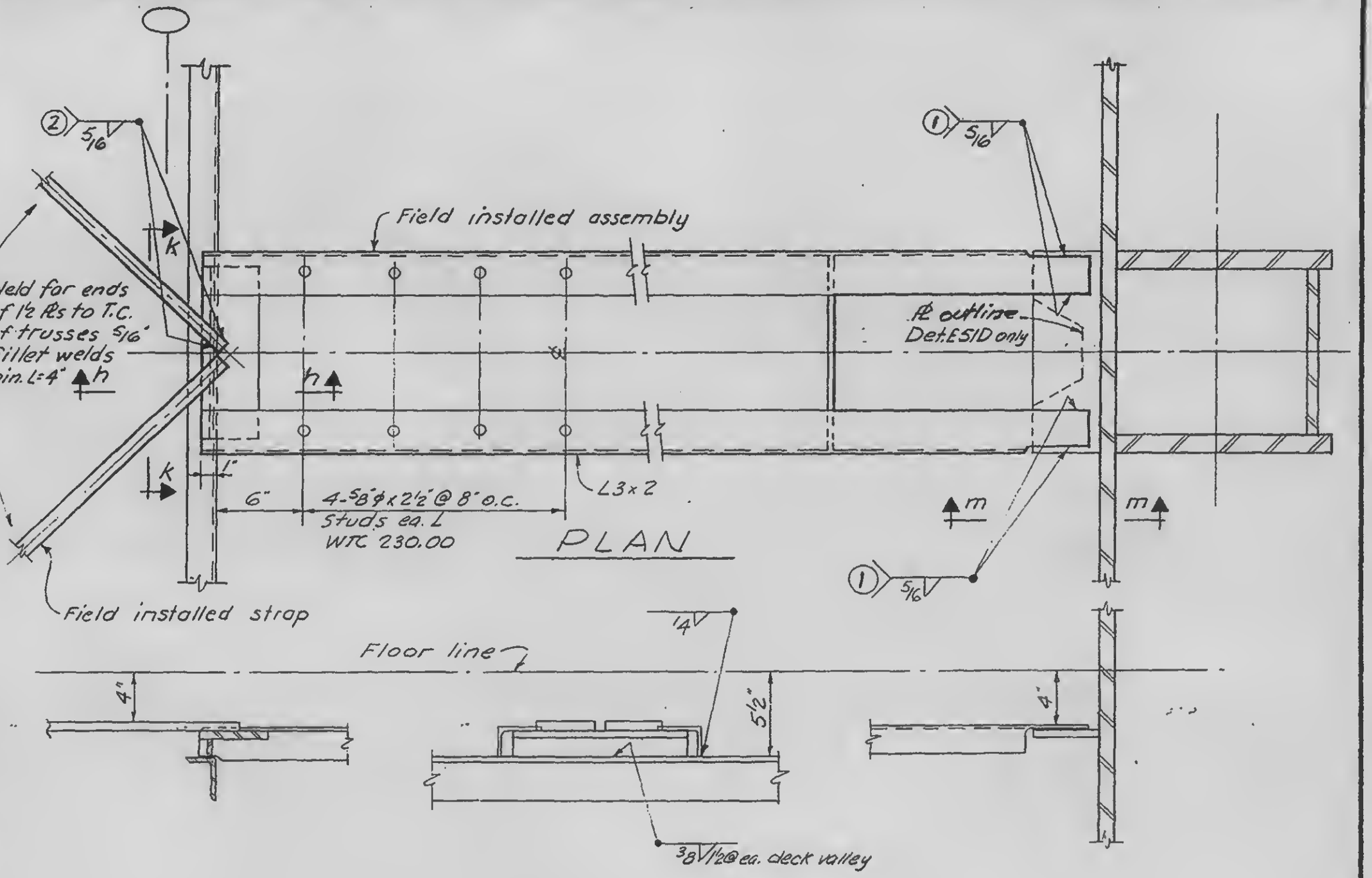
REVIEWED W. Brewer

18-AB4-5.4

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAIL ES1D, ES2D | DATE: 2-21-69

REVISIONS



LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

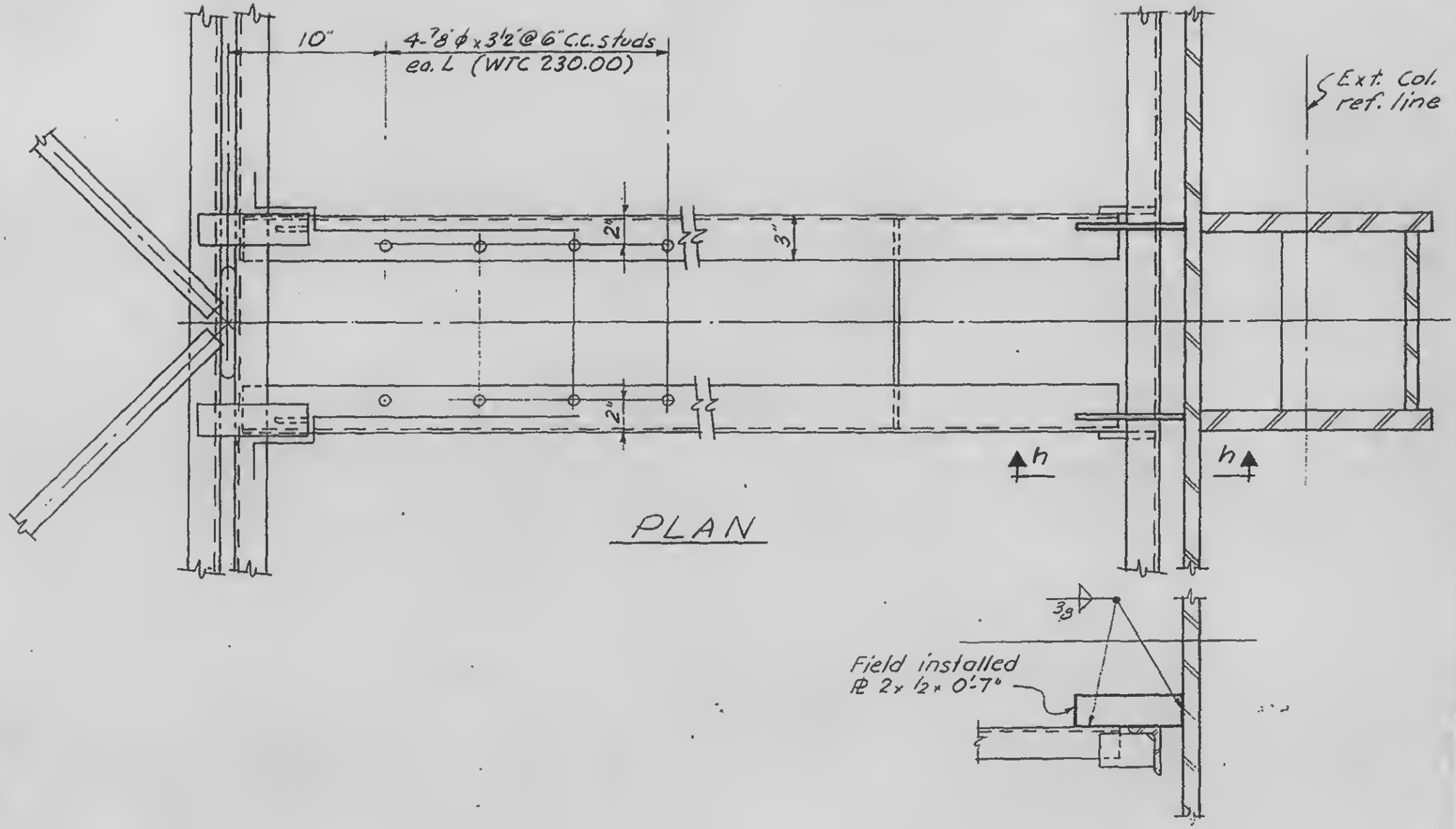
DESIGNED: J. Karp
DRAWN: A. Franqui
REVIEWED: W. Brewer

18-AB4-5.5

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAIL E-54A | DATE: 2-1-69

REVISIONS



PLAN

Section h-h

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No. 34360
UNIVERSITY OF THE STATE OF NEW YORK

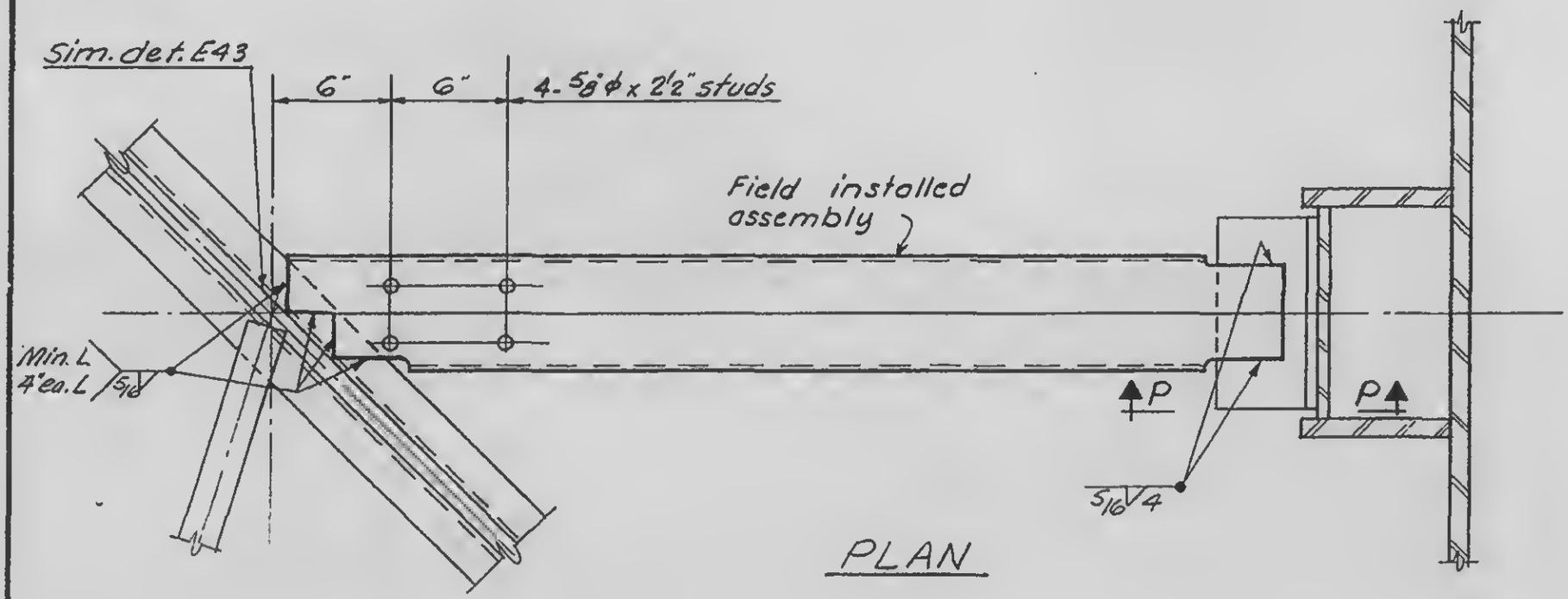
DESIGNED J. Karp
DRAWN A. Franqui
REVIEWED W. Brewer

18-AB4-5.6

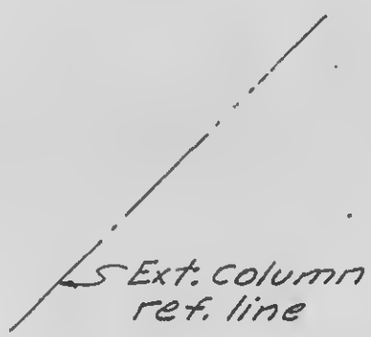
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

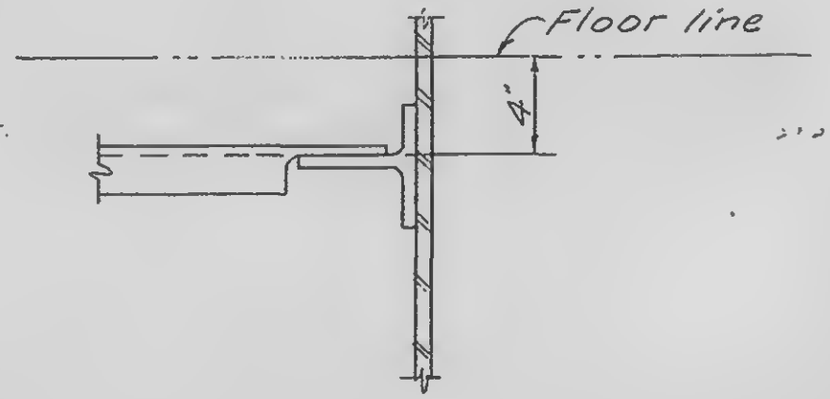
PROJECT: THE WORLD TRADE CENTER | TITLE: DETAIL E59A | DATE: 2-7-69

REVISIONS



PLAN





Section p.-p

LICENSED PROFESSIONAL ENGINEER — LESLIE E. ROBERTSON — No. 34360 — UNIVERSITY OF THE STATE OF NEW YORK

SIGNED S. Karp

DRAWN A. Franqui

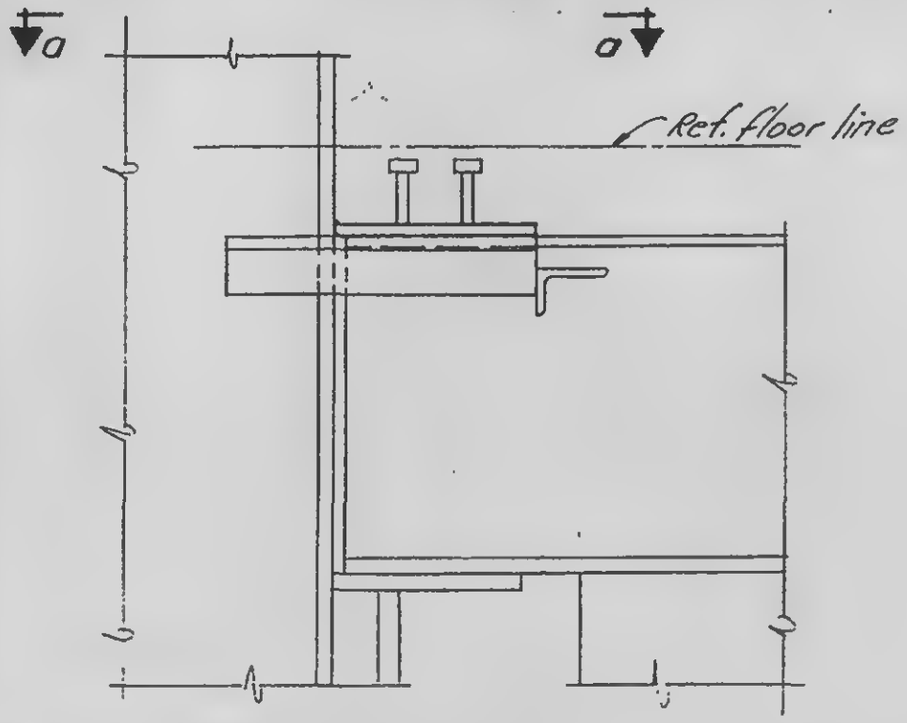
REVIEWED W. Brewer

18-AB4-5.7

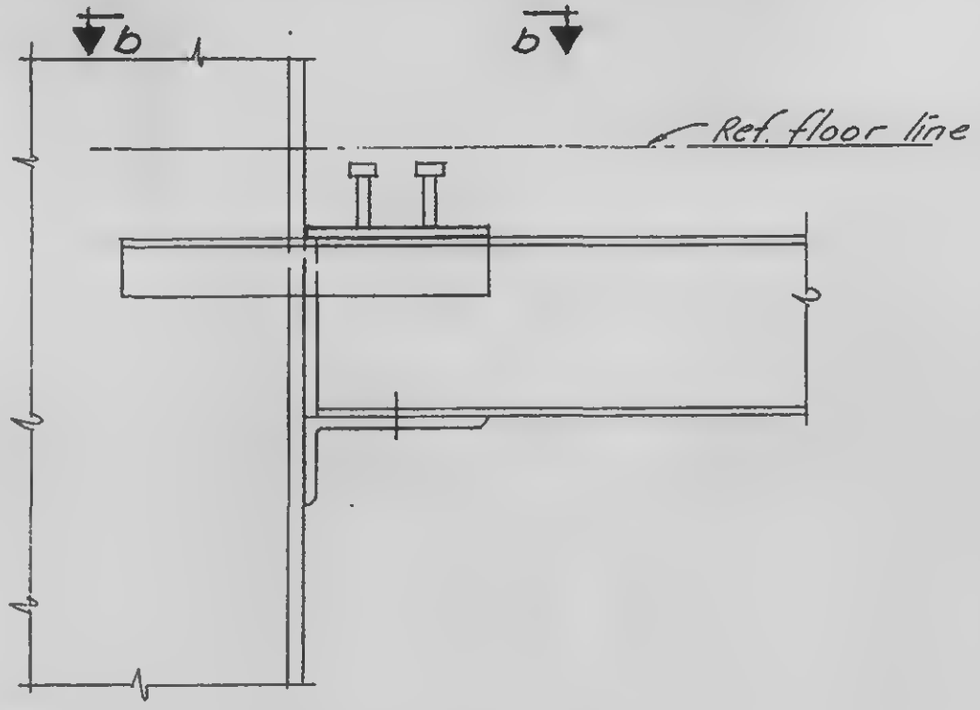
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS 159, 160, 161, 161A, 163 & 163C | DATE: 2-7-69

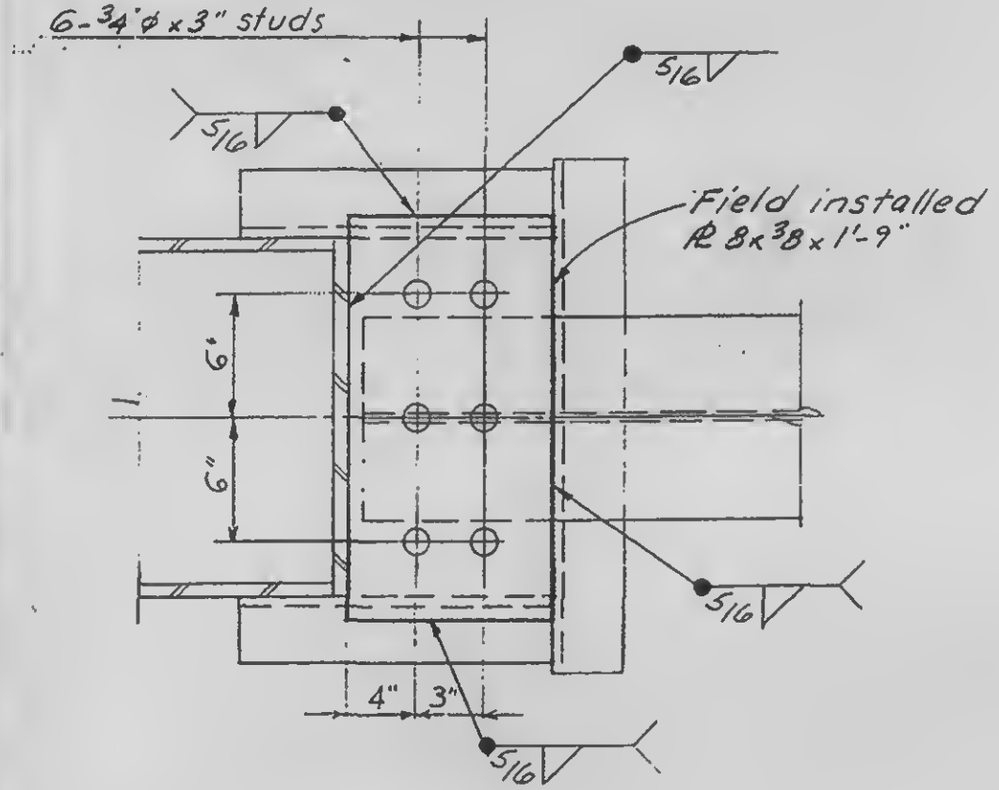
REVISIONS



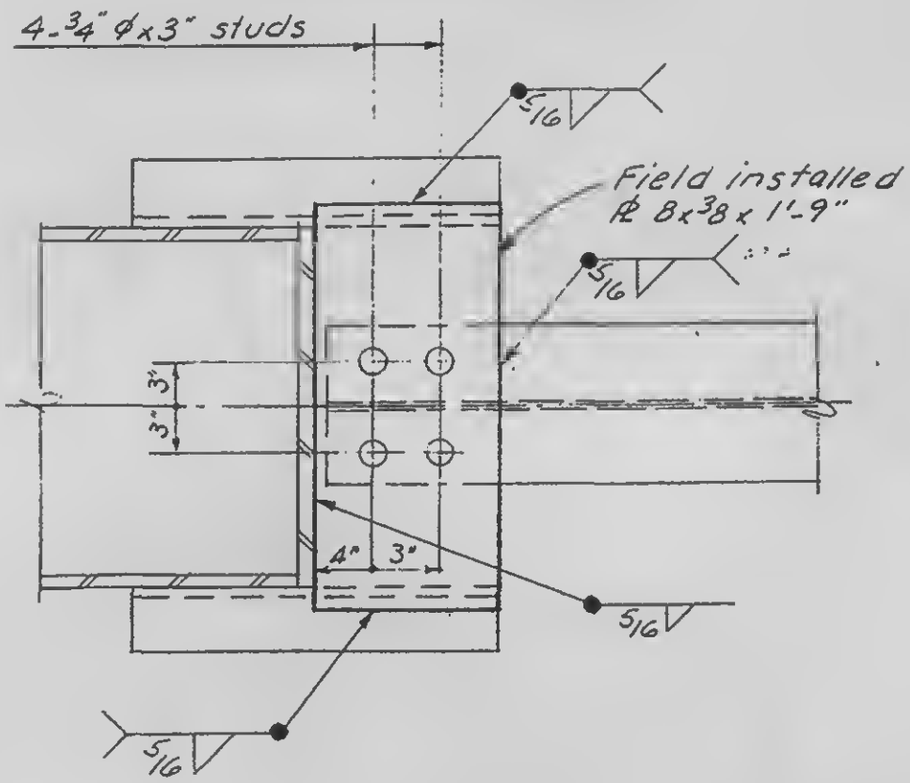
Detail 159, 160, 161



Detail 163 & 163C



Plan a-a



Plan b-b

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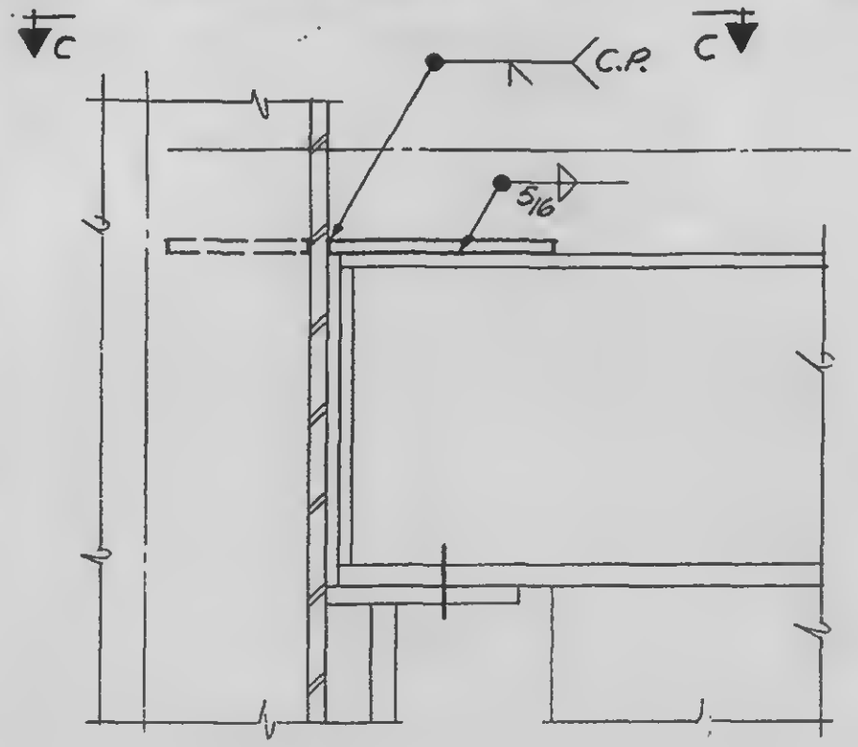
DESIGNED: S. Karp
DRAWN: J. Adams
REVIEWED: W. Brewer

18-A84-6.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

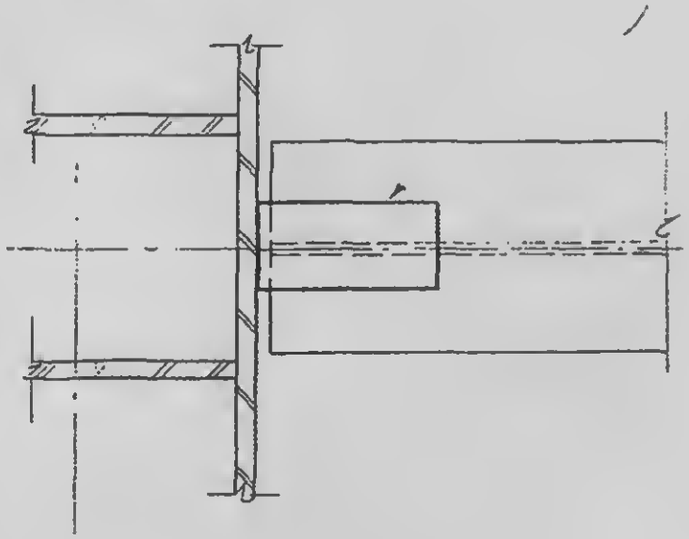
PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS 150-158, 162, 164-169, 163A, B | DATE: 2.7.69

REVISIONS

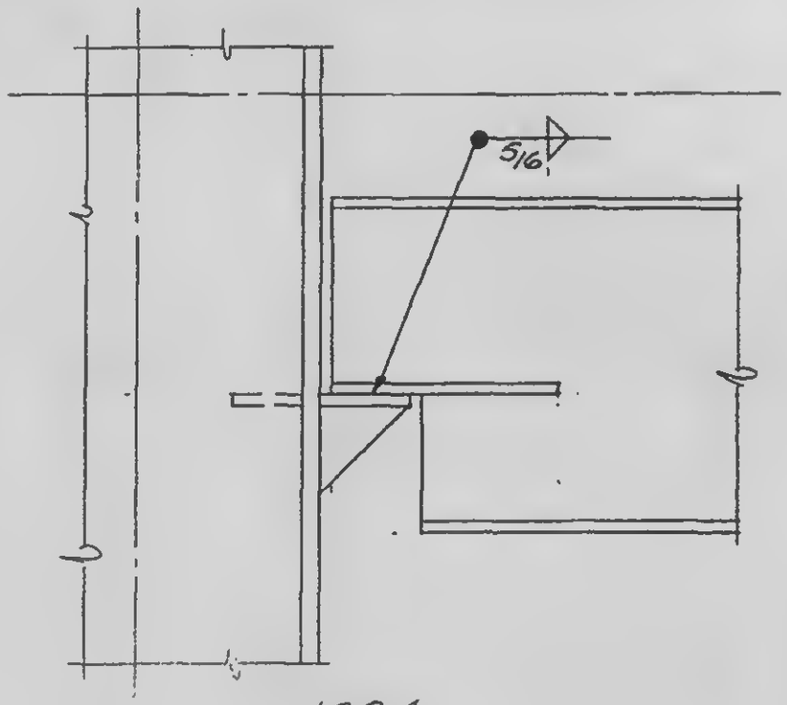


150-158, 162, 164-169

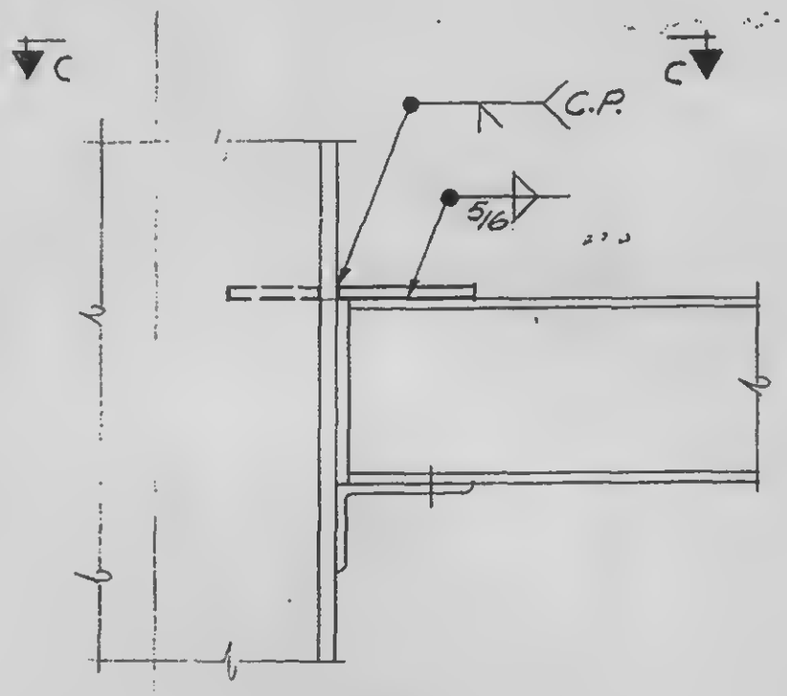
Field installed PL,
PL 5 x 3/8 x 1'-0" for 164, 164A, 165
PL 6 x 3/8 x 1'-0" for all others.



Plan c-c



163A



163B

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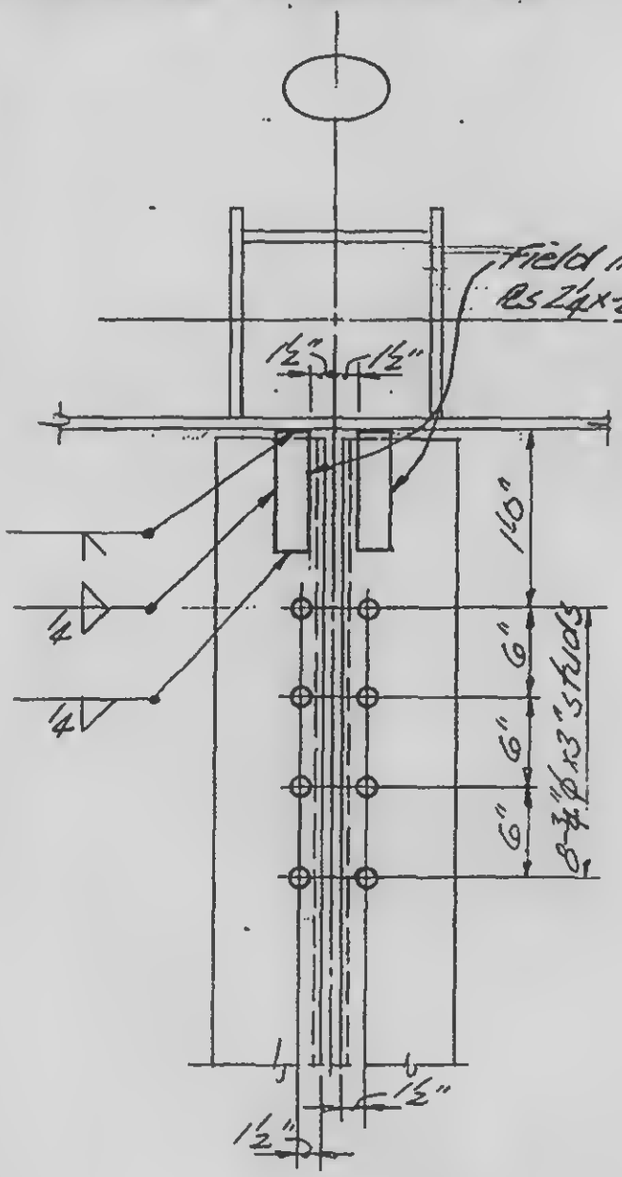
DESIGNED S. Kaip
DRAWN J. Adams
REVIEWED W. Brewer

18-A84-6.2

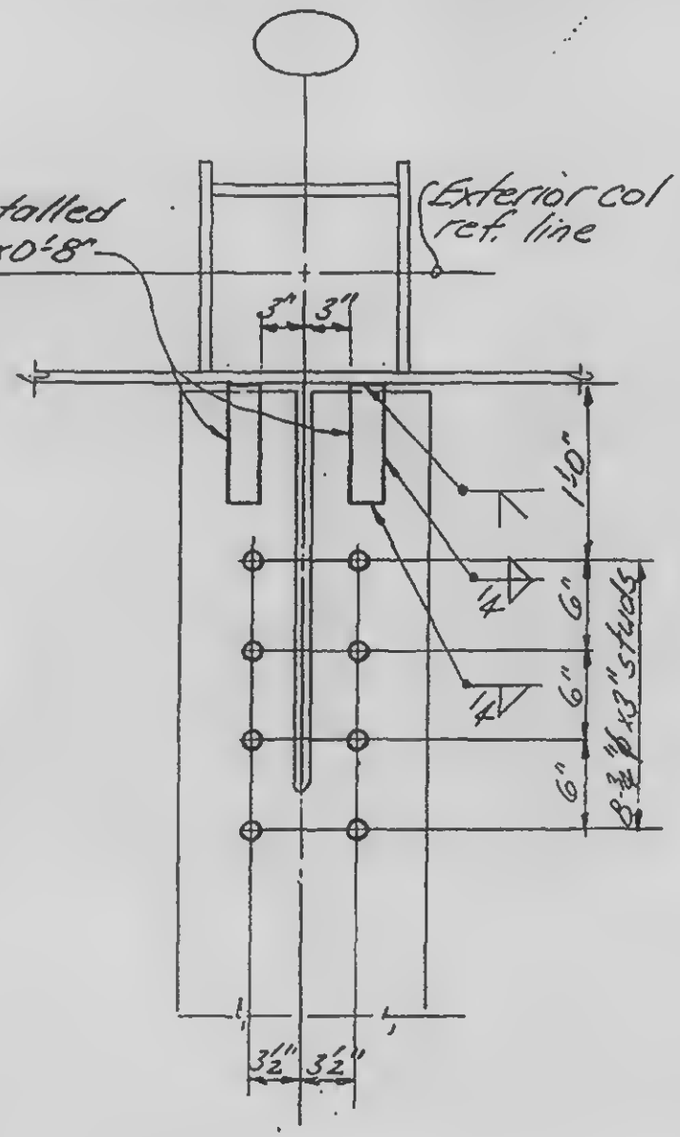
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS 8.4, 8.10 & 8.X | DATE: 11/11/69

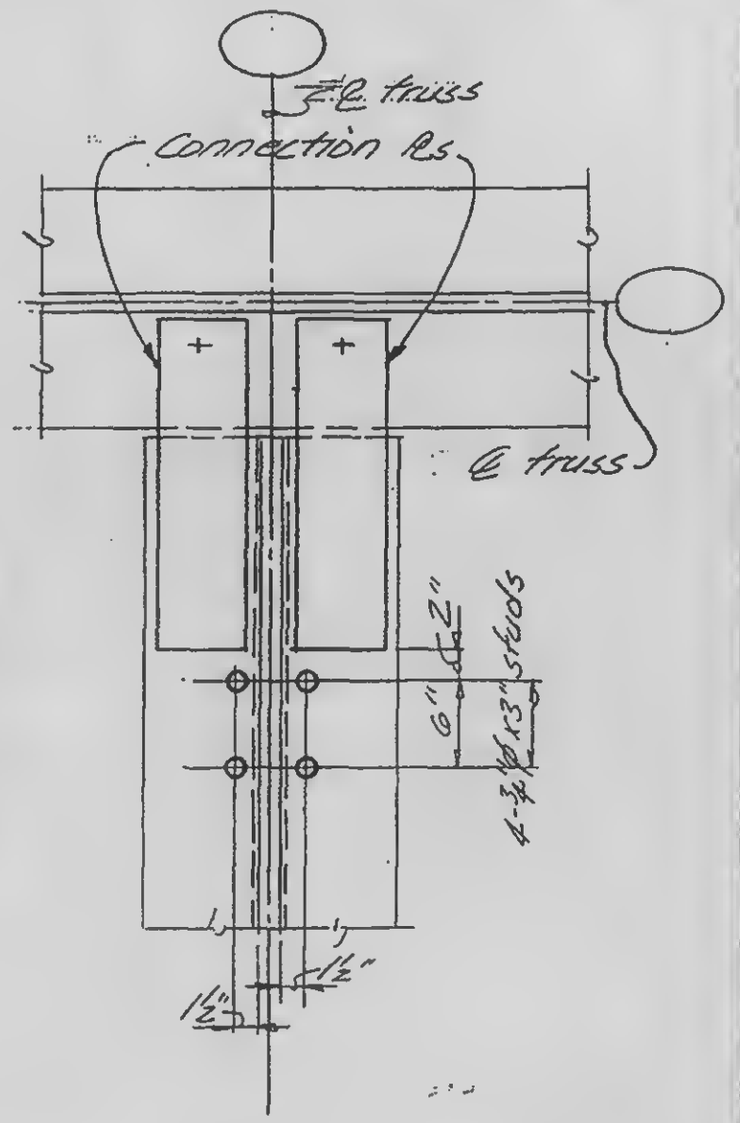
REVISIONS



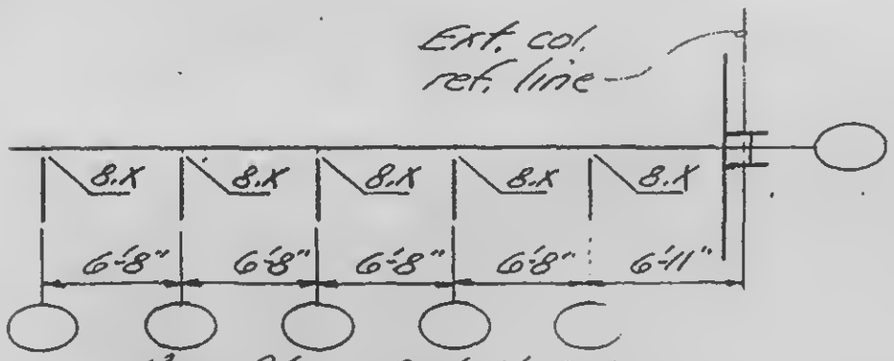
Detail 8.4



Detail 8.10



Detail 8.X



Key Plan Detail 8.X

see 18-AB3-4.3, 4.4 & 4.5 for locations

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DRAWN

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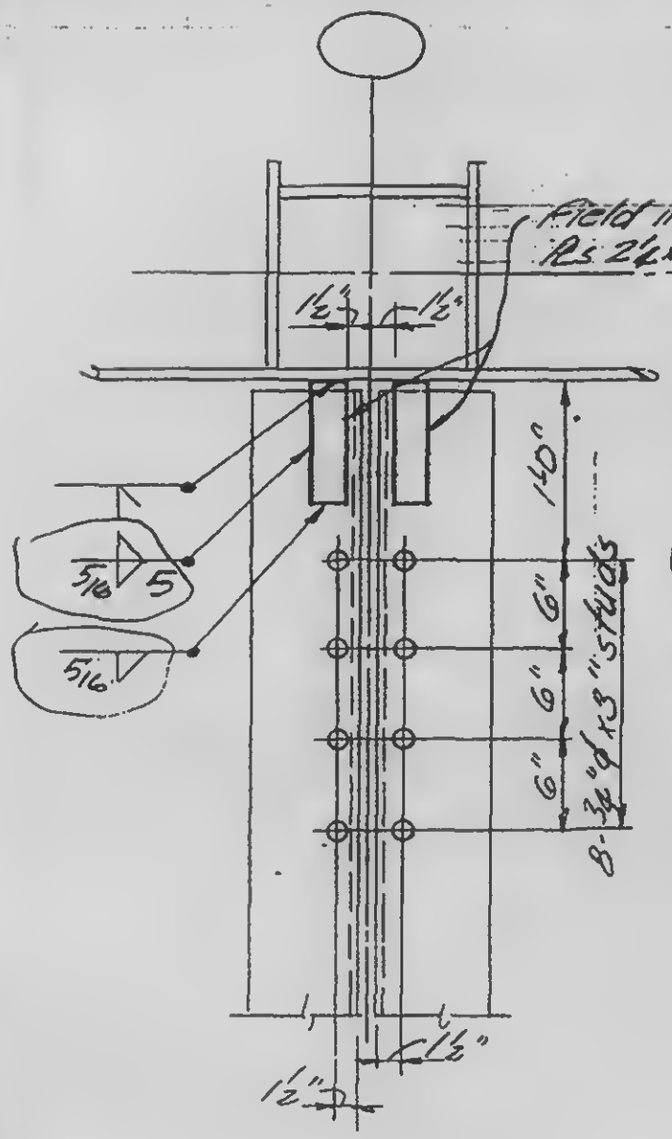
18-AB4-7.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

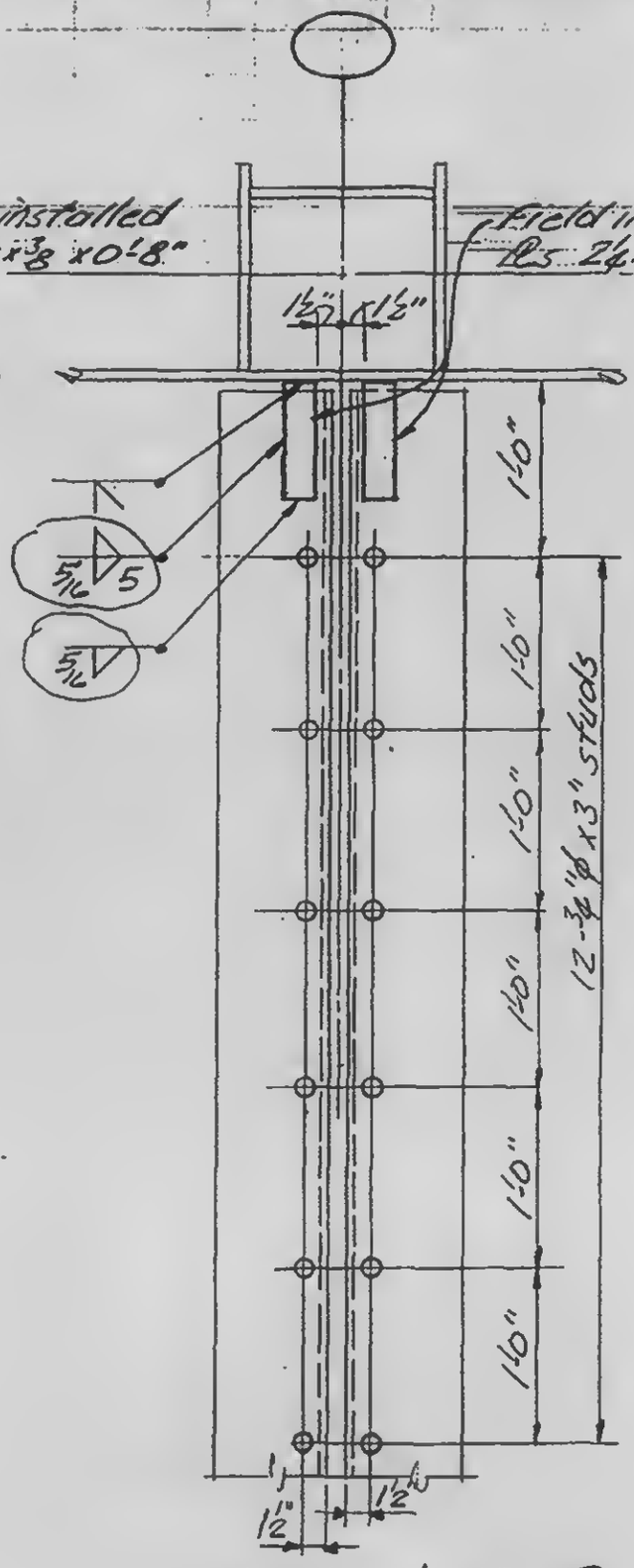
PROJECT: WORLD TRADE CENTER — TITLE: DETAILS 10.1A, 10.1B, 10.1C, ETC. — DATE: 10/8/69

REVISIONS

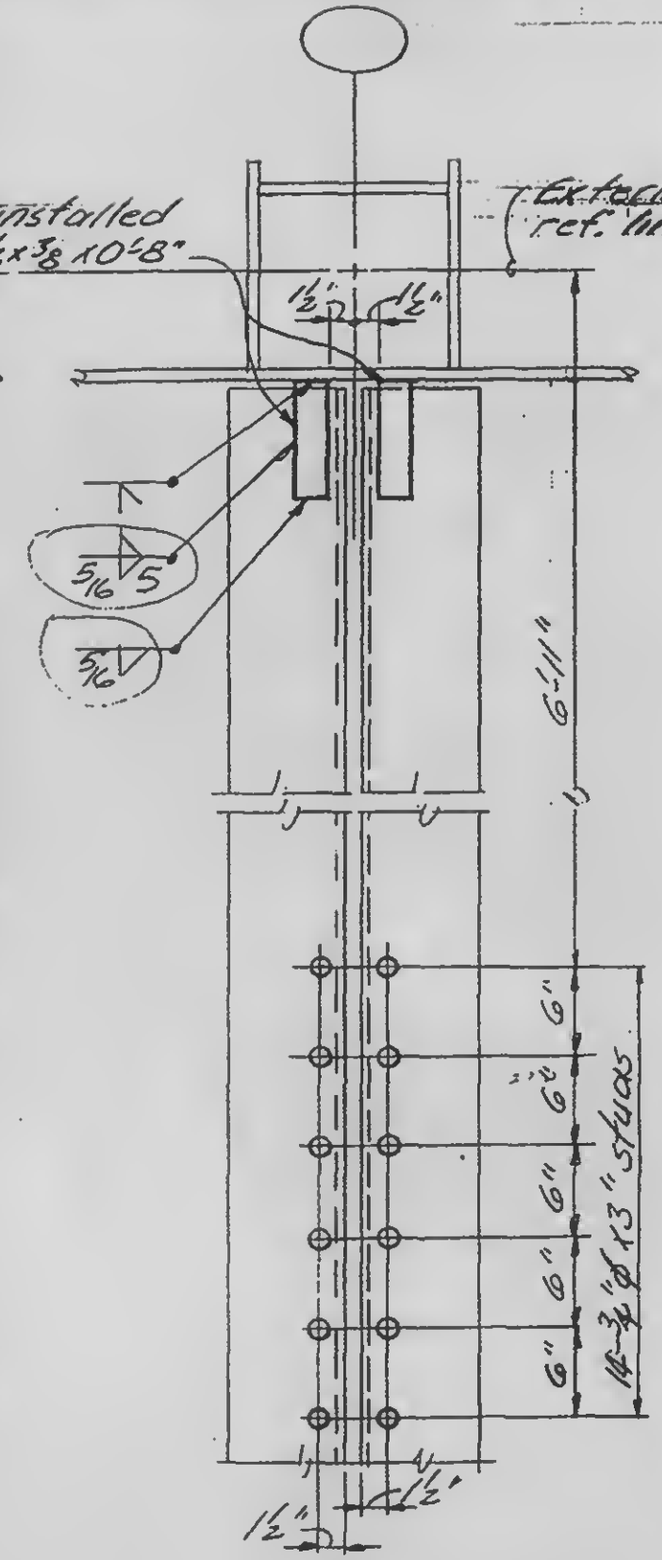
12/3/69



Detail 10.1A



Detail 10.1B



Detail 10.1C

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W. Brewer

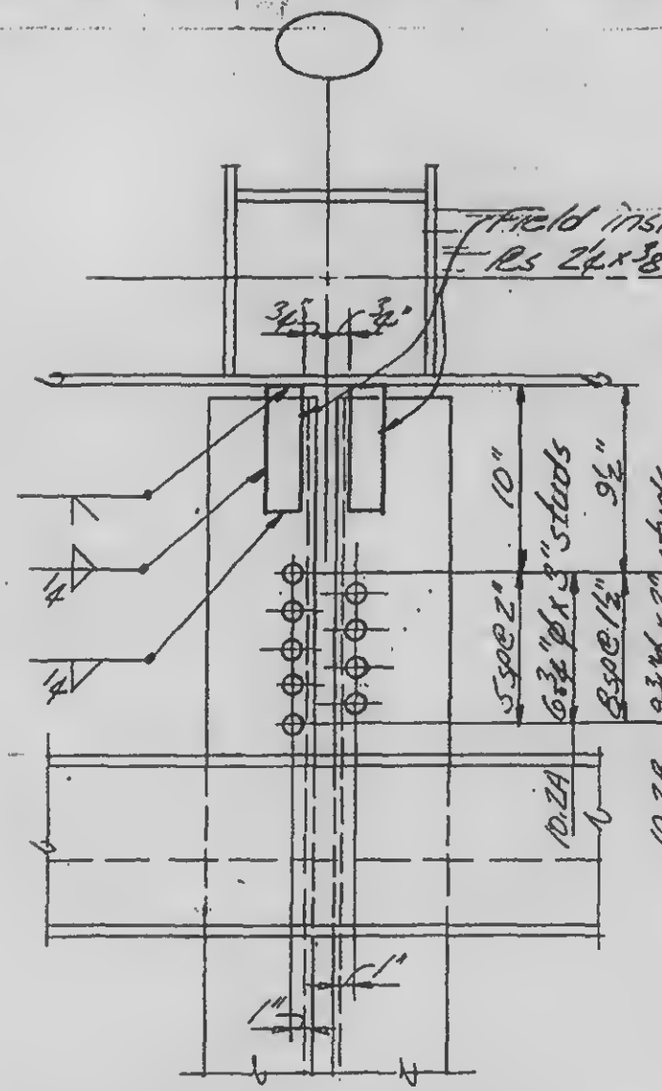
18-AB4-7.2

SKILLING HELLE CHRISTIANSEN ROBERTSON — Structural & Civil Engineers

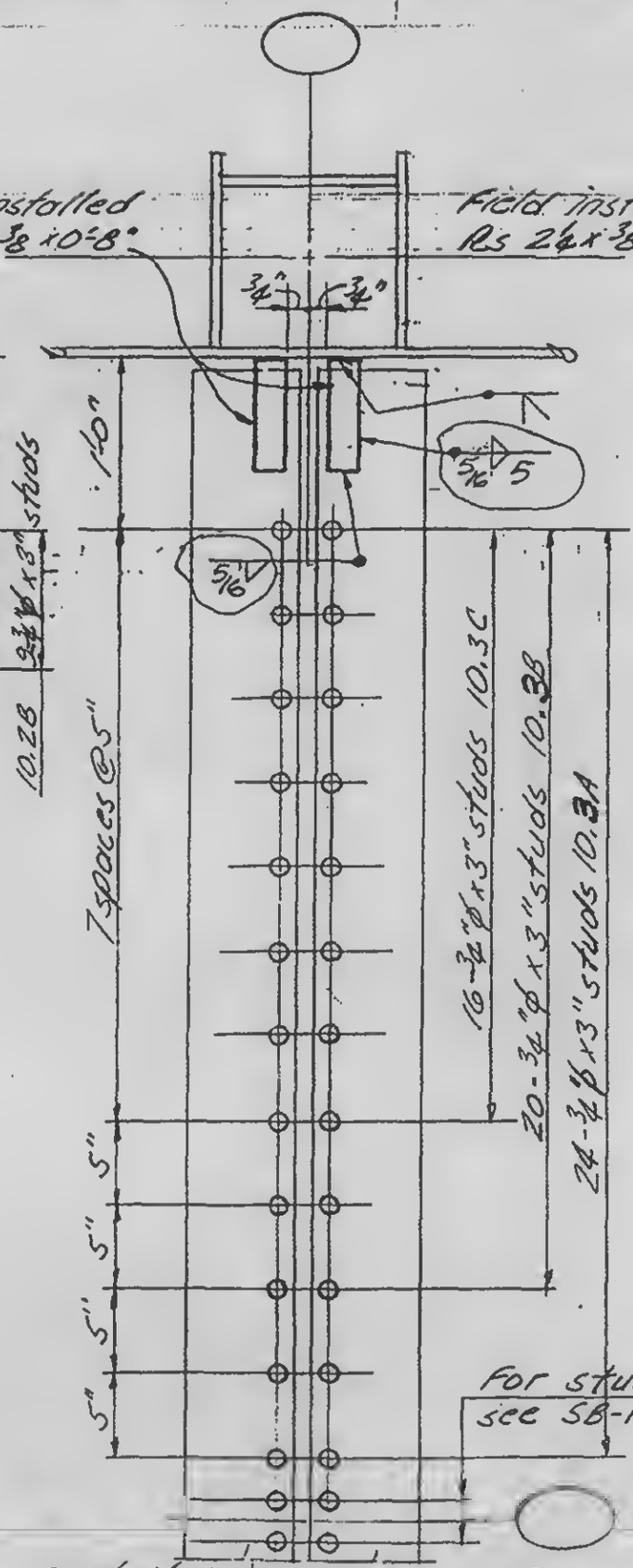
PROJECT: U.N. HEADQUARTERS TRADE CENTER | TITLE: DETAILS 10.1A & 10.2B, 10.3A, 10.3B, 10.3C, 10.4A & 10.4B | DATE: 11-7-68

REVISIONS

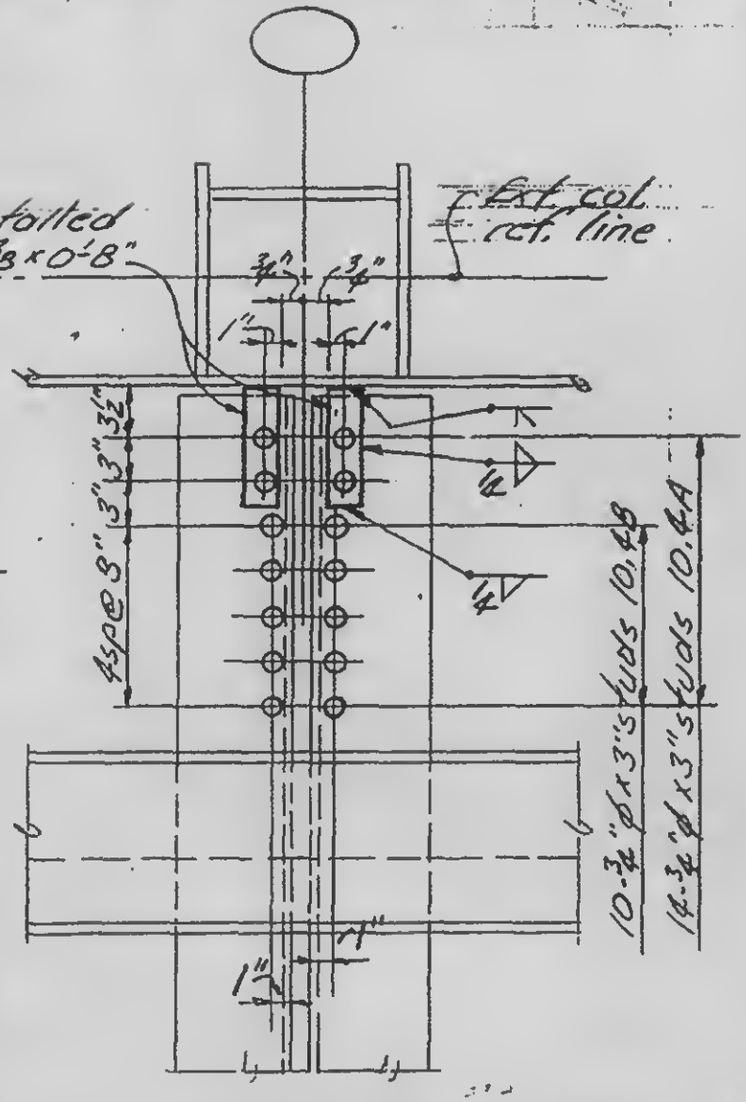
12/13/69



Detail 10.2A & 10.2B



Detail 10.3A, 10.3B, 10.3C



Detail 10.4A & 10.4B

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DRAWN

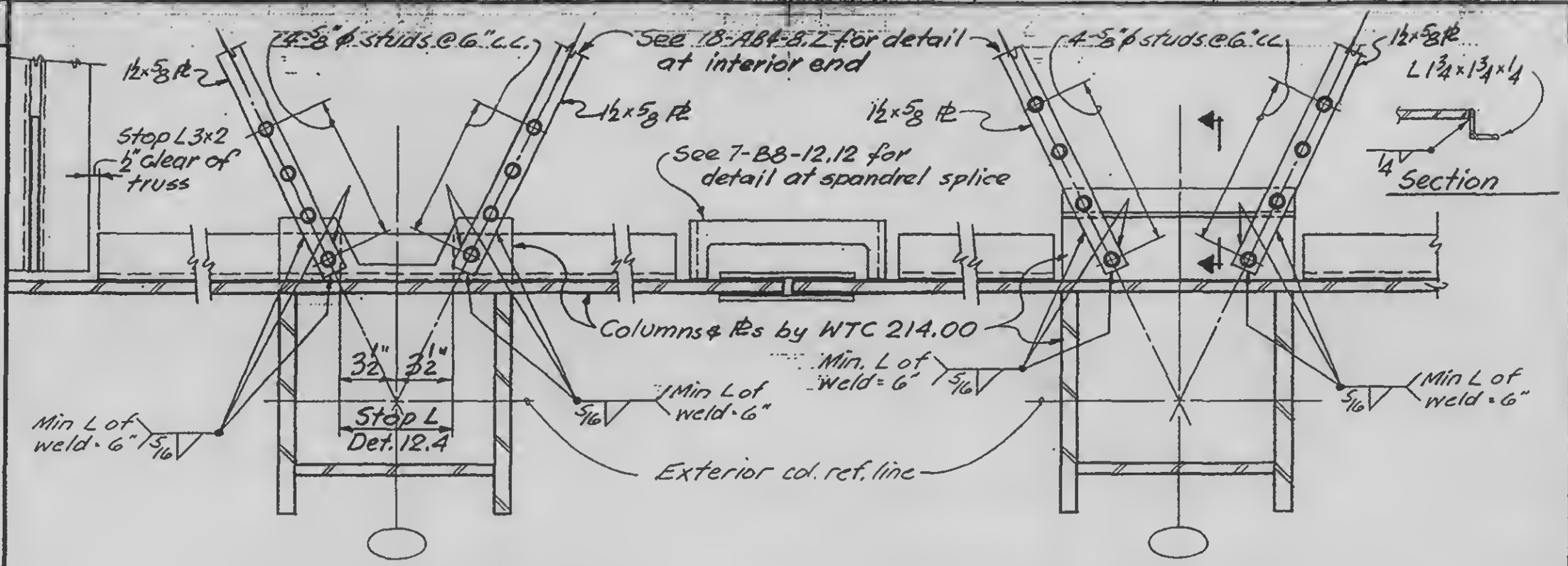
CHECKED

18-AB4-7.3

SKILLING HELLE CHRISTIANSEN ROBERTSON — Structural & Civil Engineers

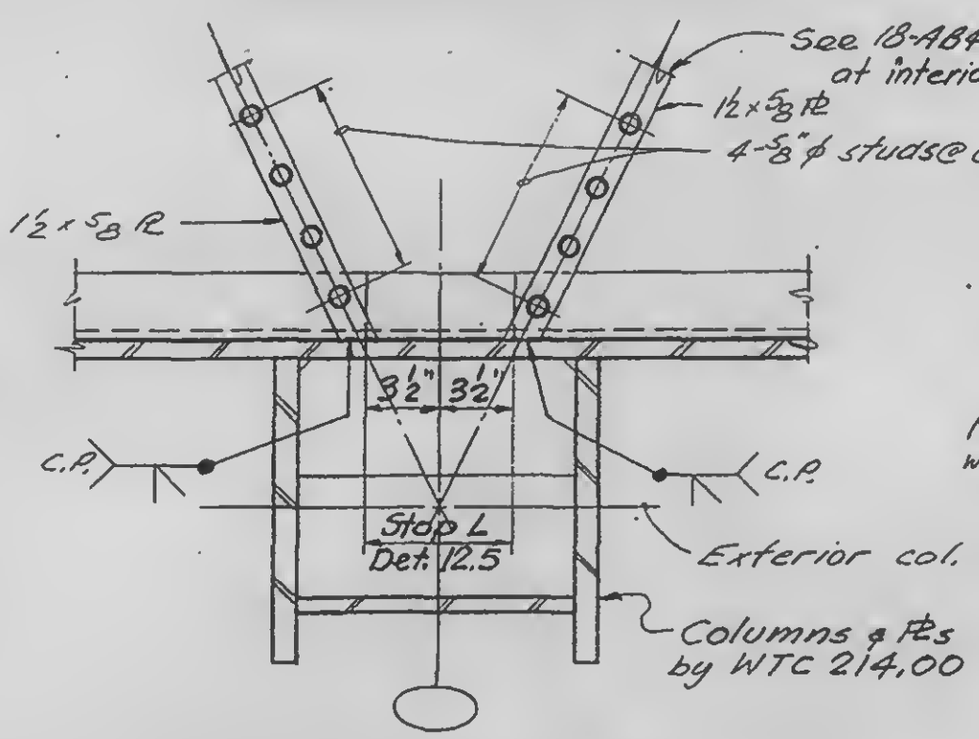
PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS 12.1 - 12.5, 12.9 & 12.10 | DATE: 11/7/69

REVISIONS

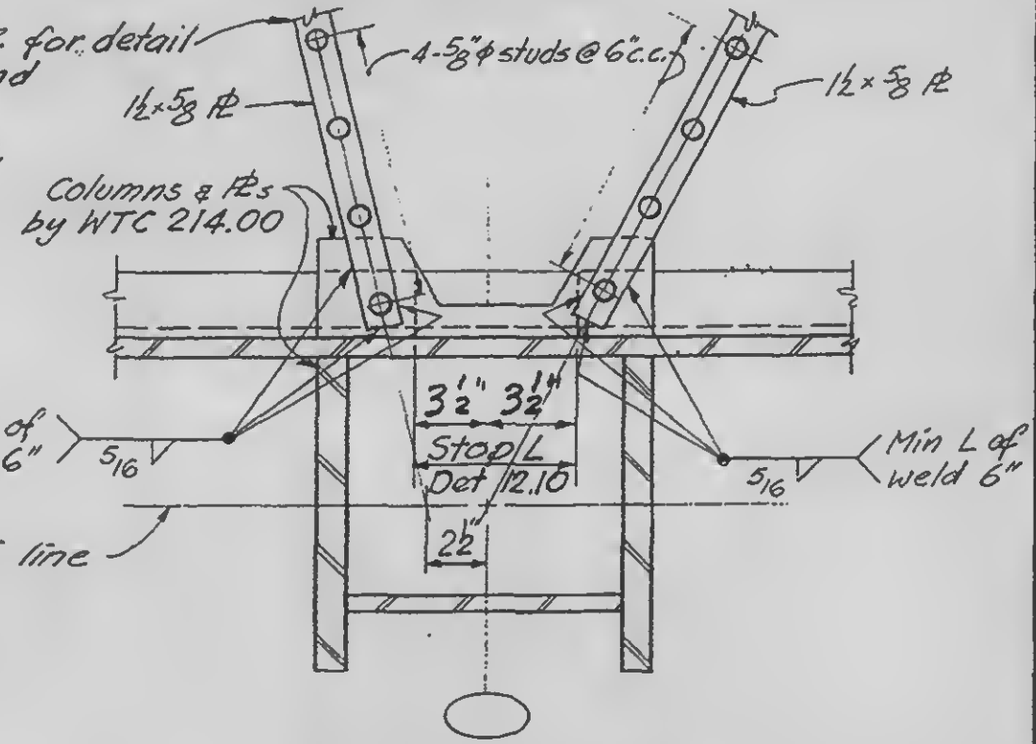


DETAIL 12.1 & 12.4

DETAIL 12.2



DETAIL 12.3 & 12.5



DETAIL 12.9 & 12.10

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DESIGNED

DRAWN J. Adams

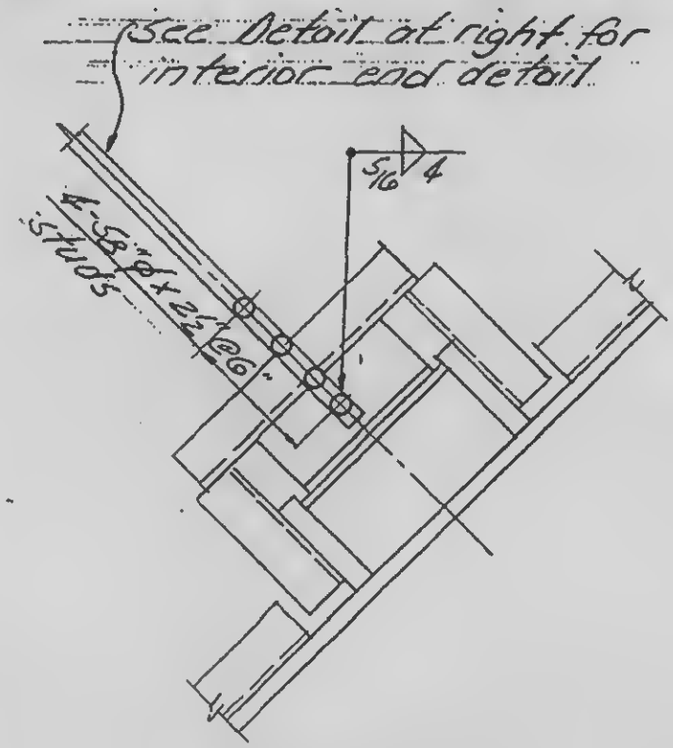
REVIEWED W. Brewer

13-AB4-8.1

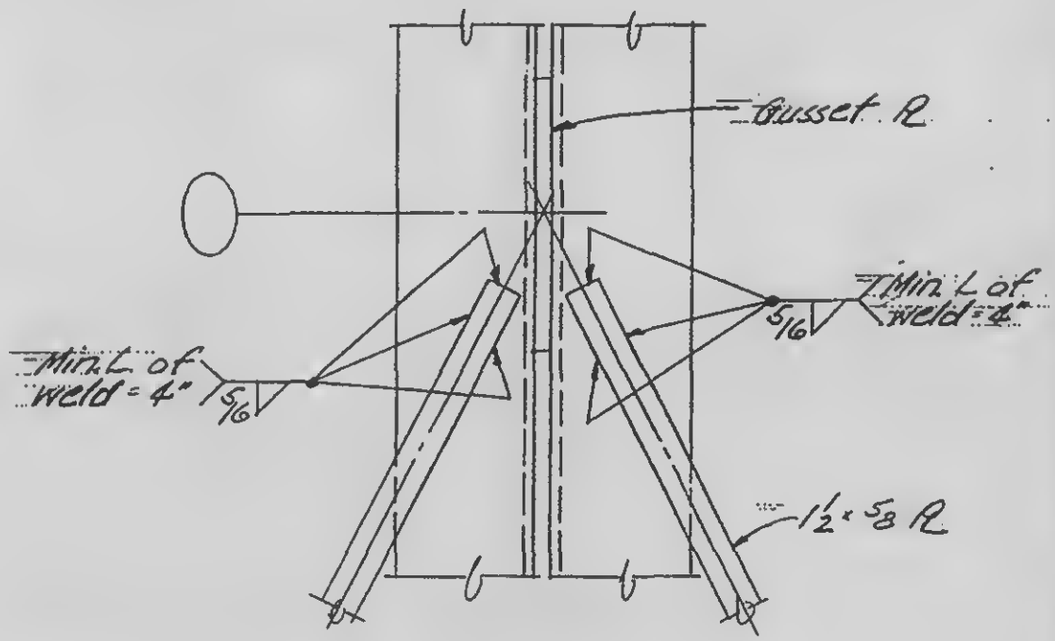
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS 12.6, 12.7 & 12.8 | DATE: 11-7-69

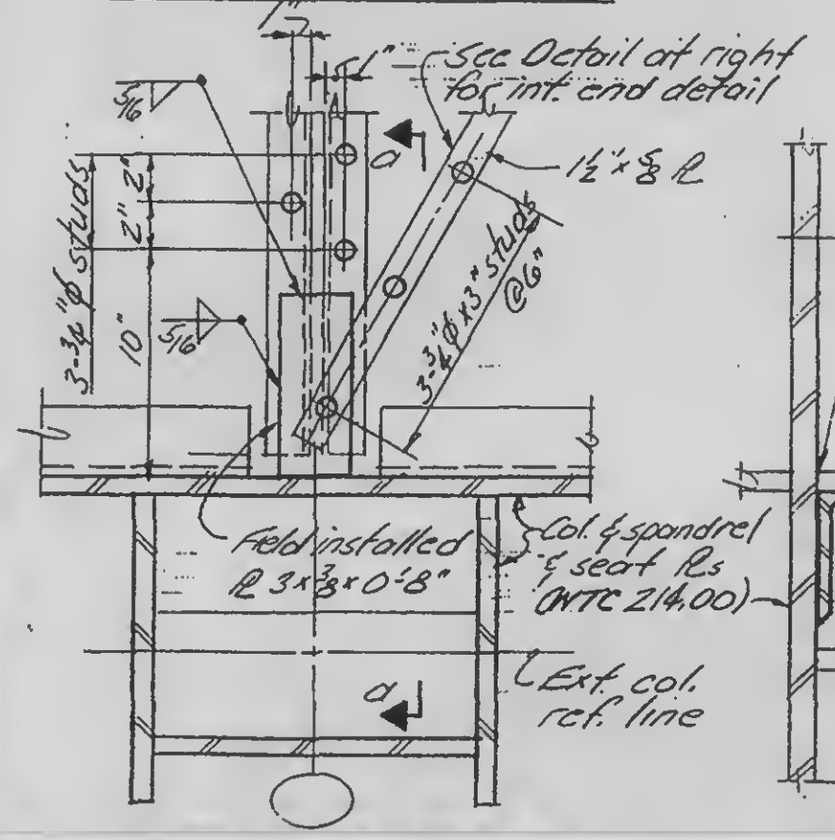
REVISIONS



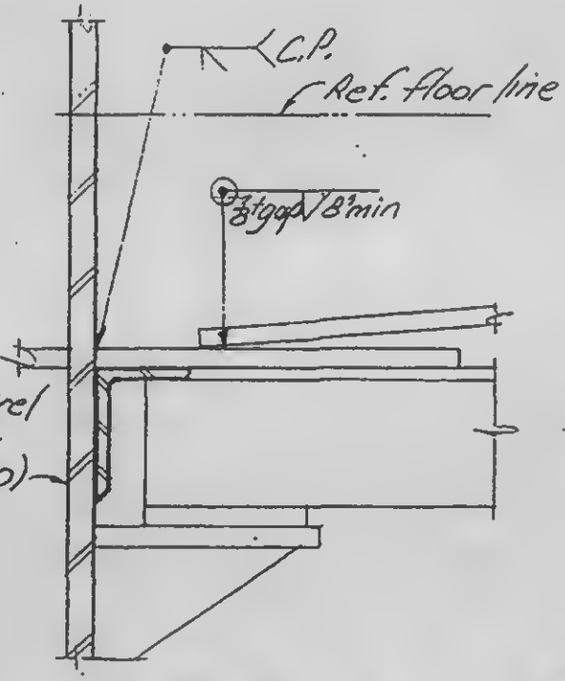
Detail 12.6 & 12.7



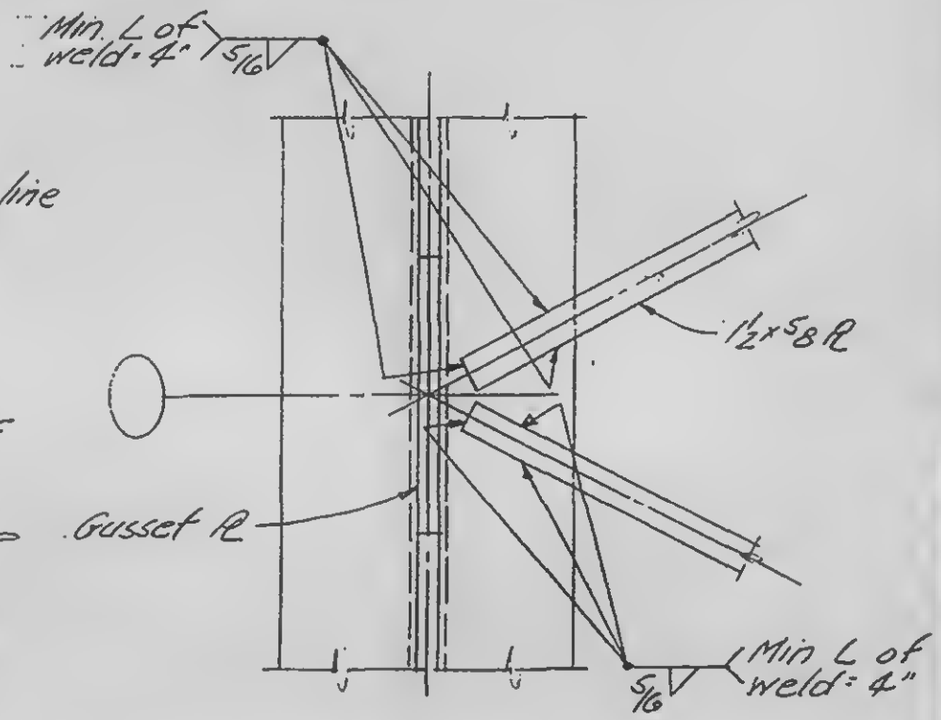
Interior Detail Parallel to Truss



Detail 12.8



Section a-a



Interior Detail Perpendicular to Truss

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SIGNED

DRAWN

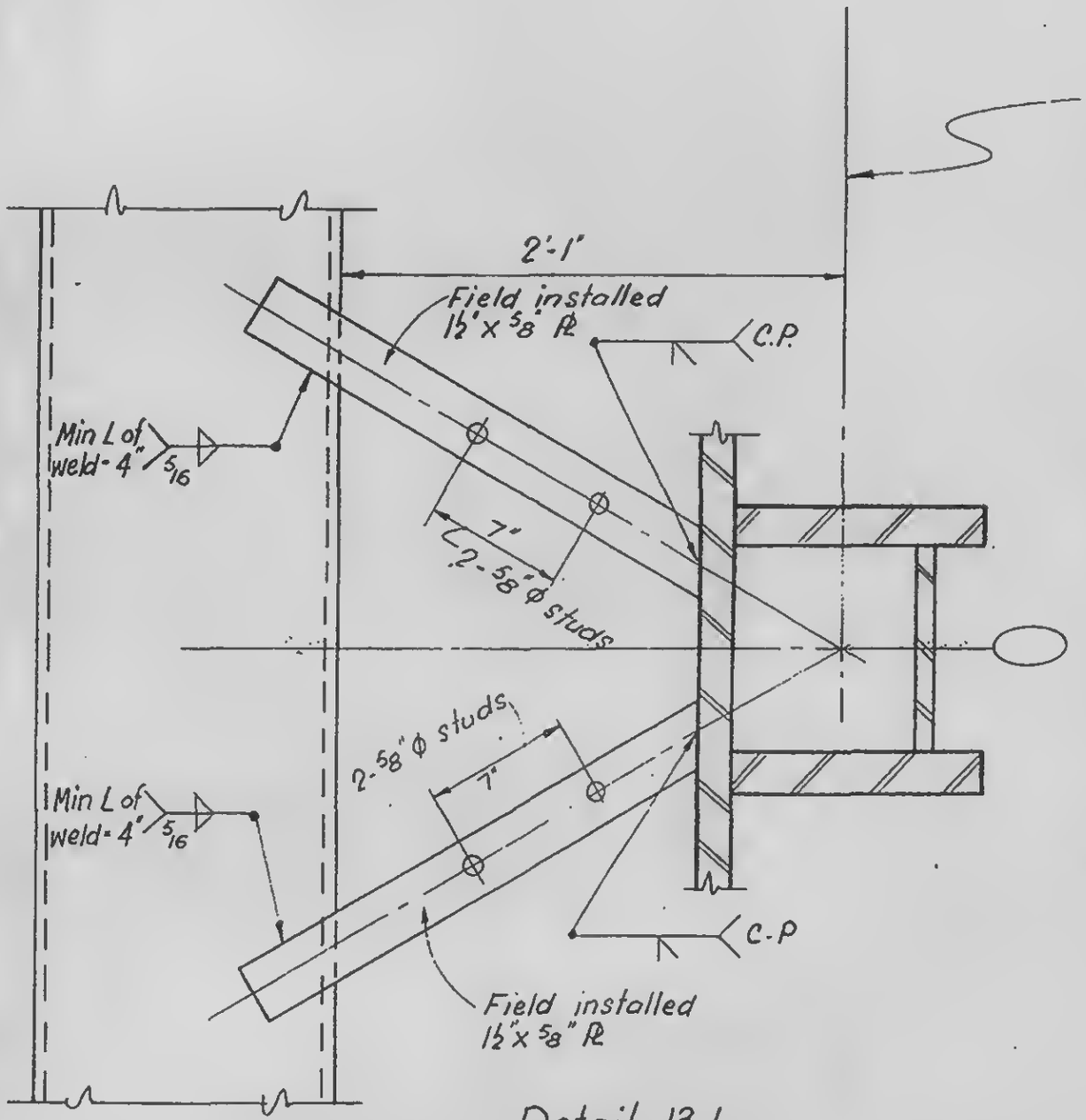
REVIEWED

18-AB4-B.2

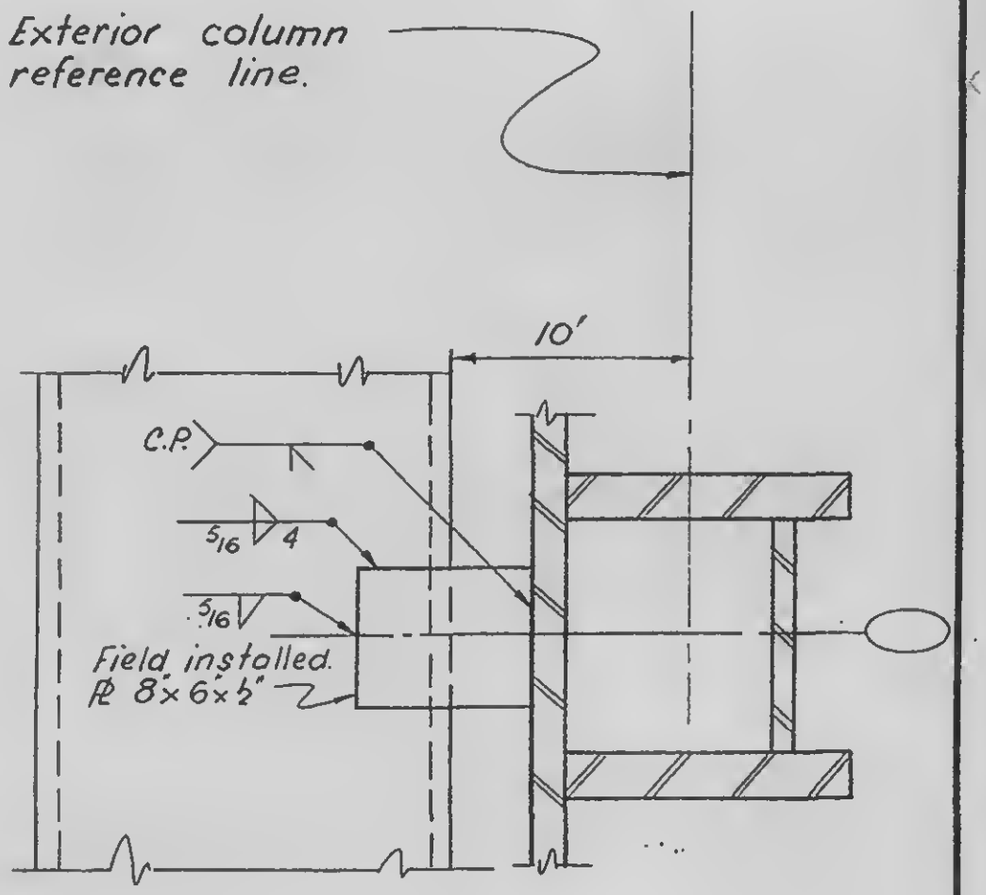
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

PROJECT: THE WORLD TRADE CENTER | TITLE: DETAILS 13.1, 13.2, 13.3 | DATE: 11.7.69

REVISIONS



Detail 13.1



Detail 13.2 & 13.3

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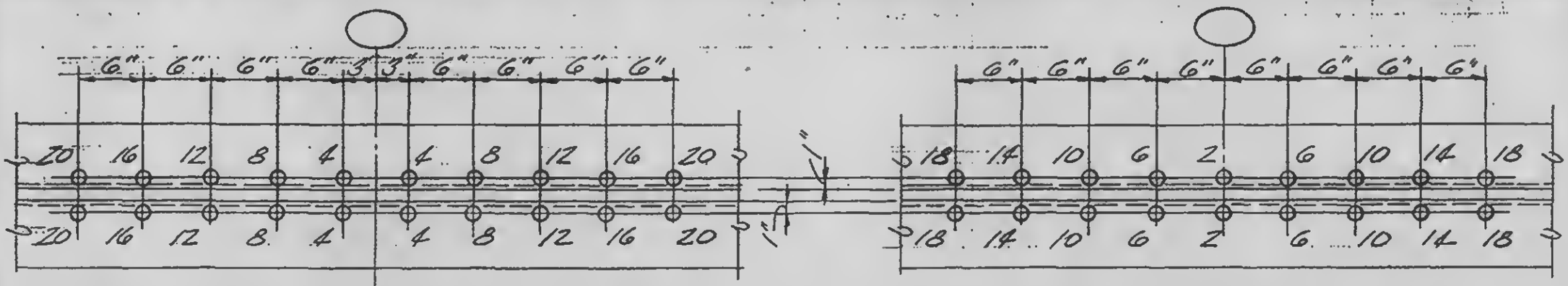
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W ewer
DRAWN
T Terrelonge
REVIEWED

18-AB4-9

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON — Structural & Civil Engineers

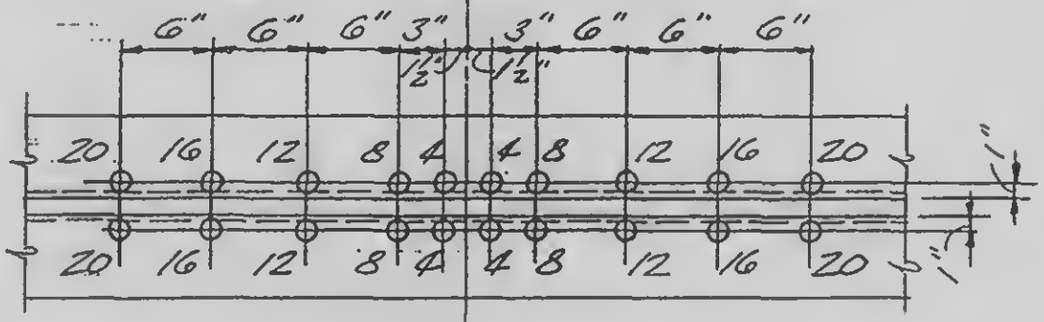
PROJECT: THE WORLD TRADE CENTER | TITLE: STUD ARRANGEMENT A & D | DATE: 11/1/69

REVISIONS



Arrangement A 4, 8, 12, 16, 20

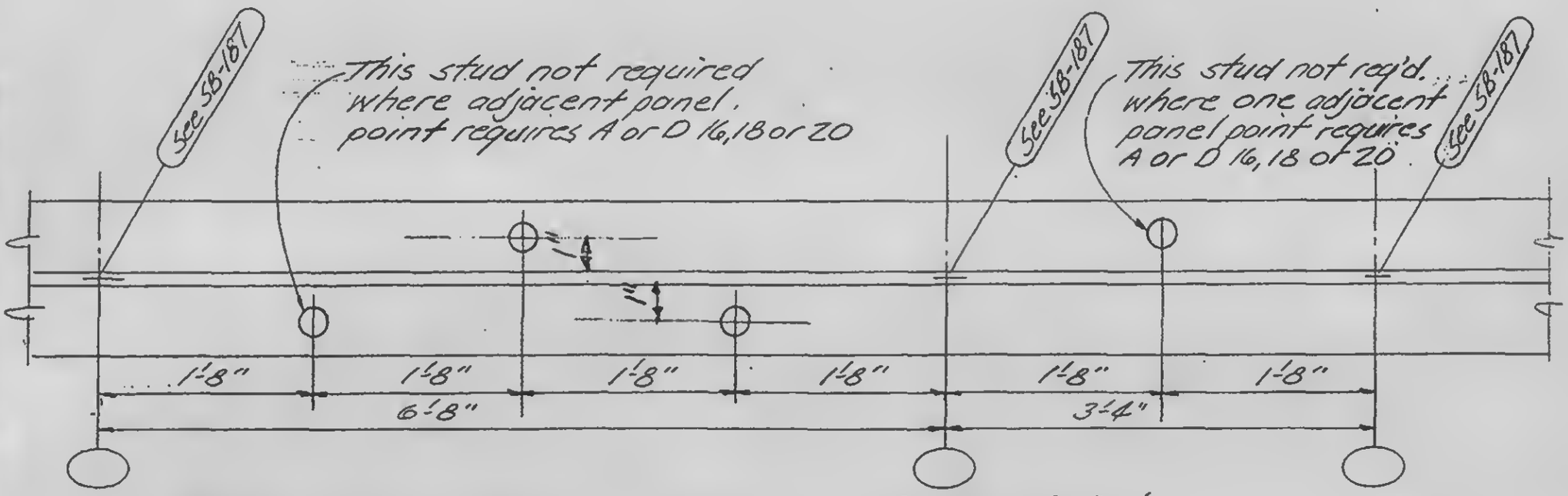
Arrangement A 2, 6, 10, 14, 18



Arrangement D 4, 8, 12, 16, 20

Notes:

1. All studs shall be ¾"ϕ x 3" long headed studs unless otherwise noted.
2. For shear stud requirement of top panel points see Dwg. SB-187. Example (A10) indicates 10 studs located as shown in Arrangement A. Shear studs shall be placed at each location identified in the applicable arrangement by a number equal to or smaller than the number of studs required.



Typical Arrangement Between Panel Points

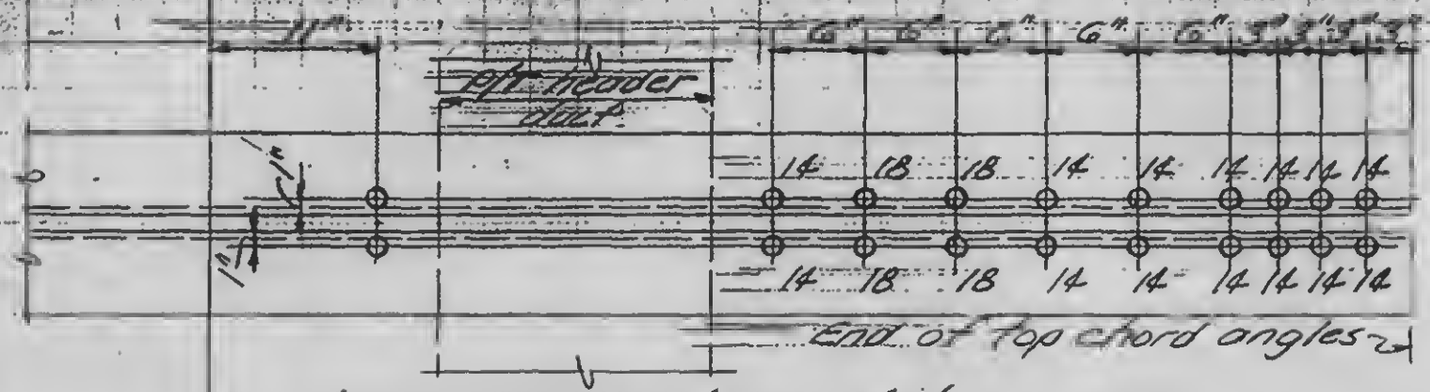
LICENSED PROFESSIONAL ENGINEER LESLIE E. ROBERTSON No. 34960 UNIVERSITY OF THE STATE OF NEW YORK

DRAWN

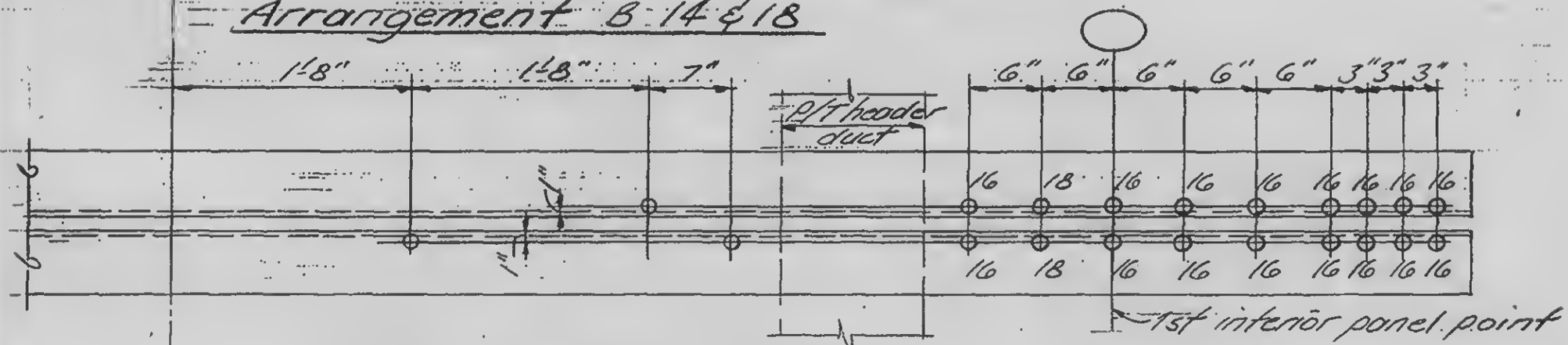
REVIEWED

18-AB4-10.1

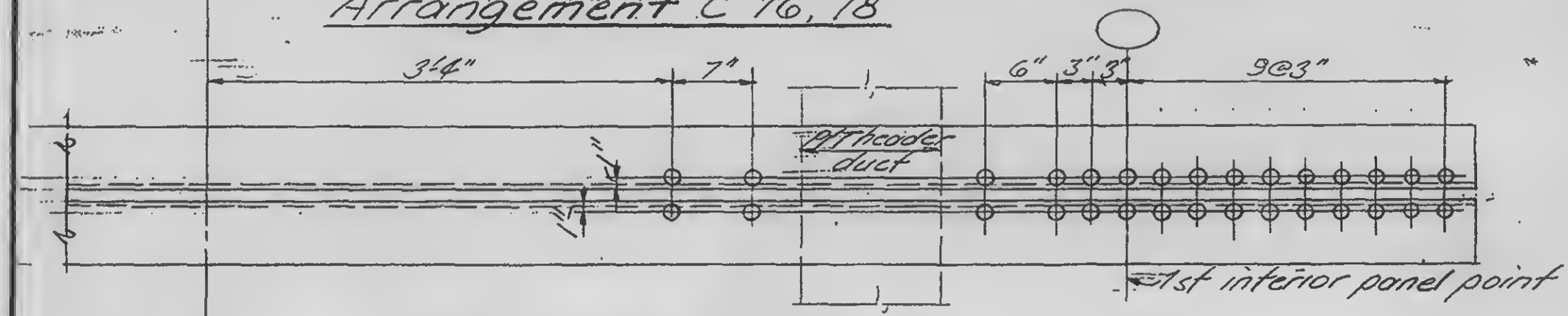
REVISIONS



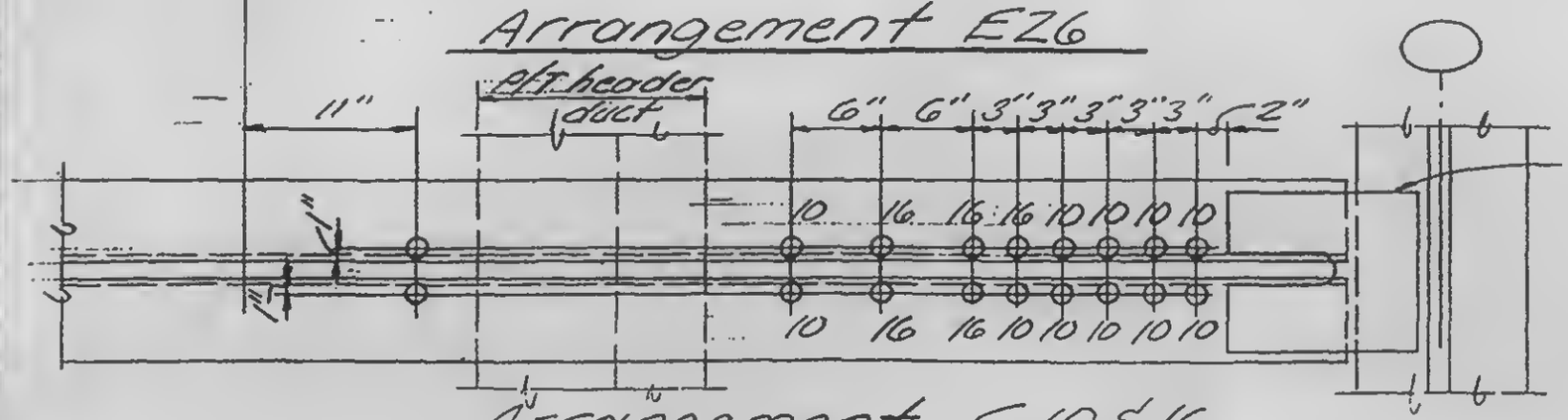
Arrangement B 14 & 18



Arrangement C 16, 18



Arrangement EZ6



For notes see 18-AB4-10.1

Arrangement F 10 & 16

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SIGNED

DRAWN

REVIEWED

18-AB4-10.2